

FORTY-TWO: THE HITCHHIKER'S GUIDE
TO TEACHING LEGAL RESEARCH
TO THE GOOGLE GENERATION

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ABSTRACT

Students are coming to law school increasingly dependent on computers to serve their research needs. And they expect that computerized legal research will be both more efficient and more effective than book-based research. These expectations place students in conflict with traditionalists who point to the inherent limitations of computer-assisted legal research and the dangers in relying on legal research conducted entirely in electronic databases. These traditionalists favor a “books first,” if not a “books only,” approach.

This paper explores the cultural conflict between the traditionalists and the “Google generation,” evaluates the dangers associated with computer-assisted legal research, and proposes a pedagogical approach to research training that stresses a client-based approach over the more familiar medium-based approach presently employed by many law schools.

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Ian Gallacher **

"Forty-two! . . . Is that all you've got to show for seven and a half million years' work?"

"I checked it very thoroughly," said the computer, "and that quite definitely is the answer. I think the problem, to be quite honest with you, is that you've never actually known what the question is."

"But it was the Great Question! The Ultimate Question of Life, the Universe, and Everything. . . ."

"Yes," said Deep Thought with the air of one who suffers fools gladly, "but what actually is it?"¹

I. INTRODUCTION

The situation for first year law students learning legal research is not as dire as it is for Douglas Adams's aliens but the essential dilemma they both face is the same. Both are reliant on computers to answer complex questions and law students, much like the aliens in "The Hitchhiker's Guide to the Galaxy," often struggle to understand, or properly interpret, the answers they receive.

There is nothing new in the notion that law students have trouble understanding how to conduct efficient legal research,² nor are some of the reasons for this phenomenon hard to understand. The law is, after all, a complicated web of interrelated doctrines and often

* With apologies to the late Douglas Adams and his "Hitchhiker's Guide to the Galaxy" series of books.

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¹ Douglas Adams, *The Hitchhiker's Guide to the Galaxy*, 181 (Pocket Books edition 1979).

² See, e.g., Robin K. Mills, *Legal Research Instruction in Law Schools, The State of the Art or, Why Law School Graduates do Not Know How to Find the Law*, 70 Law Libr. J. 343 (1977)(noting the "never ending source of puzzlement" among private law librarians concerning the difficulty law school graduates have in using a library; Thomas A Woxland, *Why Can't Johnny Research? or It All Started with Christopher Columbus Langdell*, 81 Law Libr. J. 451 (1989)(claiming that many law graduates are "incompetent" to perform legal research.)

contradictory interpretative texts. First year law students frequently lack the contextual understanding necessary to discover and evaluate all the extant decisions necessary to develop a full analysis of the issues presented to them. In addition to trying to acquire this broad overview of the law and the way it works, they must simultaneously grapple with a multiplicity of challenges: unfamiliar surroundings, a curriculum seemingly designed to keep them off-balance, new ways of thinking, and teachers speaking a new language or, at the very least, a dialect of English with which they are unfamiliar. And, of course, each student is located at a different point along a skills continuum. Legal research is a demanding discipline requiring excellent legal researchers to be “curious, persistent, flexible people”³ and these attributes are not universal even, or especially, among lawyers or law students.⁴

But law school and law students have always been this way, at least since the legal academy adopted its present Langdellian form.⁵ What is different, however, and what is making things substantially more difficult for law students in recent times, is the computer.

It is no secret, nor is it any form of profound insight, to say that we are still in the early days of an information revolution. From the first days of recorded history until very recently, the records on which that history has been kept have been maintained in written form on physical pages, first in handwriting and then, after the advent of printing, the impress of moveable type. In the law, these pages, bound into books then organized in libraries, have been the repository of all legal knowledge – an analog database of legal information – with sophisticated finding aids developed to help lawyers find the law relevant to their issues quickly and effectively.

³ Christina L. Kunz, Deborah Schmedemann, Ann Bateson, Matthew Downs, Susan Catterall, The Process Of Legal Research, 6th Edition, at xxvi (2004).

⁴ Some have suggested that bad teaching is another possible reason. See, e.g., Robert C. Berring & Kathleen Vanden Heuvel, *Legal Research: Should Students Learn It or Wing It?*, 81 Law Libr. J. 431, 438 (1989) (“We do not deny that most current legal training is abysmal.”) But even supposing, for argument’s sake only, that Berring and Vanden Heuvel’s position was correct in 1989 – and the complete absence of anything to support them suggests that even the authors might not have been convinced – the situation is very different today. There are no data to suggest that most research instructors are not able to teach the subject, and incompetence is not a viable reason for the problems that beset nascent legal researchers.

⁵ And the importance of legal research instruction has long been recognized by the legal academy. Robin Mills provides a valuable history of legal research education in her 1977 article, and notes that articles about legal research were being published as early as 1903. Mills, 70 Law Libr. J. at 343, n.1, citing Keashey, *Instruction in Finding Cases*, 1 Am. L. Sch. Rev. 69 (1903); Moore, *Law School Instruction in How to Find the Law*, 7 Law Notes 64 (1903); Foote, *Need for College Instruction in the Use of Law Books*, 10 Law Lib. J. 25 (1917). A brief description of the important role in legal research education played by Frederick Hicks can be found in Robert Berring and Kathleen Vanden Heuvel, *Legal Research: Should Students Learn It or Wing It?*, 81 Law Libr. J. 431 (1989).

The situation is now completely, and seemingly irreversibly, changed. The electron has replaced the type slug and the digital database is fast replacing our familiar analog model.⁶ While the final impact of this electronic revolution is impossible to predict, we are able now to evaluate some of its early effects. And one of the conclusions we can reach, at least tentatively, is that computer dependency has had a baleful impact on legal research.

This article is a meditation on contemporary legal research and possible changes in the way the subject should be taught. Absent from this article is any mention of the importance of teaching students about the mechanical workings of the various tools lawyers use to conduct legal research. It seems so resoundingly obvious that law schools should be doing this that any discussion of the issue would appear contrived and sterile. The much more interesting, and more difficult, questions to answer are what else law students should learn, who should teach it to them, and why they should learn it. These are the questions this article seeks to address.

It first seeks to identify and explain the tension between those advocates of traditional book research and those who wholeheartedly embrace computerized research⁷, and looks at the virtues and pitfalls of both approaches. It then reflects on some possible pedagogical strategies the legal research teaching community might adopt in order to bring law students further along in their understanding of this topic, looks at the way legal research is taught in American law schools and proposes that we recalibrate our approach to the subject, favoring a client-based approach over the more familiar medium-based approach in which book research is taught first and computer research second.

II. WHY LEGAL RESEARCH MATTERS TO LAW STUDENTS

Before engaging the issue of how legal research might be taught, we must first examine the fundamental question of whether skill in legal research matters to contemporary lawyers? Although the answer would seem to be an unequivocal “yes,” the data are less certain,⁸ and

⁶ Things are, of course, more complicated than this simple assertion might indicate. Print is by no means dead and most print titles are still not available in electronic format. Michelle M. Wu, *Why Print and Electronic Resources are Essential to the Academic Law Library*, 97 Law Libr. J. 233, 236 (2005). And as Wu notes, “the majority of legal treatises are not attainable in e-book format.” *Id.* For a comprehensive listing of articles discussing the provocative question of whether print-based legal information is still relevant, see Paul E. Howard and Renee Y. Rastorfer, *Do We Still Need Books? A Selected Annotated Bibliography*, 97 Law Libr. J. 257 (2005). To remove any suspense, the authors conclude that the answer to their question is “yes.” *Id.* at 258.

⁷ Another term is “computer-assisted legal research.” Although the lawyers who helped to develop Lexis, the first full-text legal information database, believed that there was a difference between the two phrases – “computerized” research meaning that the computer would “take over the whole function” whereas “computer-assisted” would retain the attorney as the central player in the research process (William G. Harrington, *A Brief History of Computer-Assisted Legal Research*, 77 Law Libr. J. 543 (1984-85)), the less precise term has at least as much contemporary use and, some would argue, is more accurate today. Whatever the merits of that rhetorical debate, I use “computerized” and “computer-assisted” legal research interchangeably here, without any intentional subtextual significance.

⁸ See, e.g., Bryant G. Garth & Joanne Martin, *Law Schools and the Construction of Competence* (American Bar Foundation 1992).

the underprivileged status of many legal research teachers within the legal academy⁹ and the opinion of at least one scholar indicate that learning legal research might not be as crucial a matter as we in the legal research teaching community might think.¹⁰ Given these contrary indicators, it is helpful to understand the role legal research skills play in the legal education curriculum and why acquiring these skills is a useful part of every law student's education.

A. The Role of Legal Research in Law Practice

To a casual observer, the importance of legal research in the law school curriculum would appear unassailable. Research was, after all, identified as a fundamental lawyering skill by the MacCrate Report,¹¹ there are a plethora of excellent research textbooks available to teach the subject,¹² always a sign that a subject is flourishing in the academy, and studies show that legal research is a skill legal employers expect their new associates to bring to the job.¹³

But the data are less encouraging about the importance of legal research in practice. A 1992 survey indicated that legal research skills were not highly prized by the poll's responders, a group of practicing lawyers from Chicago, to represent an urban community, and the rural and small city bar in Missouri. The study's authors found that just over seventeen percent of the responders rated library research as "extremely important" and only eight percent ranked computer research as "extremely important."¹⁴ This represented a drop from more than forty-four percent of responders in a previous study who had rated legal research (not then broken into "library" and "computer" divisions) as "extremely

⁹ This is not the place to rehearse again the status issues facing the legal research and writing community. Suffice it here to say that in the 2005 ALWD/LWI survey, seven programs reported that they were taught by tenured or tenure-track teachers hired specifically to teach legal writing, fifteen were taught by tenure-track teachers hired to teach legal writing and other courses, thirty-nine were taught by teachers who were not on the tenure track and who had long-term to short-term contracts, thirty-six were taught by adjuncts, and the remainder were taught by students, graduate students, part time faculty, and tenured or tenure-track teachers for whom legal writing was not the apparent reason for hiring. Association of Legal Writing Directors/Legal Writing Institute, 2005 Survey Results ("ALWD/LWI Survey"), 6 (A copy of this report is available at www.alwd.org and www.lwionline.org).

¹⁰ I. Trotter Hardy, *Why Legal Research Training is So Bad: A Response to Howland and Lewis* 41 J. Legal Educ. 221 (1991).

¹¹ ABA Section on Legal Education and Admissions to the Bar, *Legal Education and Professional Development: An Educational Continuum* ("MacCrate Report"), at 157 (1992).

¹² To name only a few: Amy E. Sloan, *Basic Legal Research: Tools and Strategies* (Second Edition) (Aspen Publishers 2003) ("Sloan"); Christina L. Kunz, Deborah A. Schmedemann, Ann L. Bateson, Matthew P. Downs, Susan L. Catterall, *The Process of Legal Research* (Sixth Edition) (Aspen Publishing 2004) ("Kunz"); Laurel Currie Oates and Anne Enquist, *Just Research* (Aspen Publishing 2005) ("Oates and Enquist"); Ray M. Mersky and Donald J. Dunn, *Fundamentals of Legal Research* (Eighth Edition) (Foundation Press 2002) ("Mersky and Dunn"); Morris L. Cohen, Robert C. Berring, and Kent C. Olson, *How to Find the Law* (Ninth Edition) (West 1989); Ruth Ann McKinney, *Legal Research: A Practical Guide and Self-Instructional Workbook* (Fourth Edition) (West 2003).

¹³ Bryant G. Garth and Joanne Martin, *Law Schools and the Construction of Competence* American Bar Foundation Working Paper 9212 ("Garth and Martin"), Table 11 (Am. Bar F. 1992). This 1992 survey shows that ninety-two percent of those polled believed that library legal research was a skill that should be brought from law school and eighty-four percent believed the same for computer research.

¹⁴ *Id.* at 25.

important.”¹⁵ And the Garth and Martin study is seemingly inconsistent with a 1978 study where 43.3 percent of responders indicated that the ability to do legal research was a “key” element in their work, 55.9 percent said that research was of “great” importance to them, 27.1 percent said that research had “some” importance to them, and only 1.1 percent said that research was not important.¹⁶

Garth and Martin also found that neither library nor computer research, as a skill, placed in the top three factors for promotion to partnership.¹⁷ Although the survey is more than ten years old now, there is no reason to suppose that legal research skills have risen in practitioners’ estimation since it was taken.

The data here are difficult to interpret. One possible explanation is offered by Trotter Hardy, writing in response to another study showing that summer associates and junior associates are perceived as having weak research skills.¹⁸ Hardy suggests that research skills are substantially less important to the forty-five percent of lawyers in general practice than they are to the relatively small number of lawyers who work in firms of more than fifty lawyers, firms where legal research is more a part of a lawyer’s daily life.¹⁹ Hardy’s point is that if most law graduates are working in practices where their legal research needs are limited, then perhaps “the most cost-effective system of legal research instruction overall is one in which law schools teach an absolute minimum of

¹⁵ *Id.*, citing Francis Kahn Zemans and Victor Rosenblum, *The Making of a Public Profession* (American Bar Foundation 1981).

¹⁶ Leonard L. Baird, *A Survey of the Relevance of Legal Training to Law School Graduates*, (“Baird Survey”) 29 J. Legal Educ. 264, 273 (1978). When asked what role law school had in the training for attaining competency in legal research, 61.8 percent indicated that it had an “essential” role, 33.7 percent said law school was “helpful,” 3.0 percent that law school was “not helpful,” and 1.5 percent responded that law school played no role in attaining research skills. *Id.*

¹⁷ *Garth and Martin*, at Table 12.

¹⁸ I. Trotter Hardy, *Why Legal Research Training is So Bad: A Response to Howland and Lewis* 41 J. Legal Educ. 221 (1991) (“Hardy”), writing in response to Joan S. Howland and Nancy J. Lewis, *The Effectiveness of Law School Legal Research Training Programs*, 40 J. Legal Educ. 381 (1990) (“Howland and Lewis”). This study, polling law firm librarians, found that eighty percent of respondents found summer associates “less than satisfactory in their ability to attack a legal research problem effectively.” *Howland and Lewis*, at 383. Again, there is little reason to hope that law students’ research skills have improved since this study was conducted.

¹⁹ *Hardy*, 41 J. Legal Educ. at 222. The statistics bear out at least part of Hardy’s claim. J.P. Morgan’s European Equities research group, conducting research in order to make recommendations to potential investors in the legal information market, has concluded that 74% of lawyers will practice privately after graduation, compared to 8% in private industry, 5% in state or local government, and 3% in the federal government. JP Morgan Securities Ltd, Equities Research, *US Legal Publishing Industry: A Growth Story?* (2002) (“*Morgan Report*”) at 5. A copy of the *Morgan Report* is on file with the author. The overwhelming majority of lawyers in private practice work in small law firms. The J.P. Morgan study found that 89% worked in firms of ten lawyers or fewer, leaving the remaining 11% in larger firms, with only 1% working in firms of between 51 and 100 lawyers and another 1% in firms of more than 100 lawyers. *Id.* But they are less supportive of his assumption that lawyers in smaller firms find research skills less important than those in larger firms. The Baird survey (admittedly nearly thirty years old) showed that while 43 percent of practitioners in large firms felt that legal research was a key element of their professional work, 47 percent in small firms, and 49 percent of solo practitioners believed the same thing. *Baird Survey*, 29 J. Legal Educ. at 281.

research skills, with individual firms then investing whatever resources they think are necessary to raise their associates' new skills to the appropriate level."²⁰

This argument, at least, is relatively easy to counter. The Garth and Martin survey confirms what all legal research teachers already know; firms want their new associates fully trained in legal research before they come to work, and even though a relatively small proportion of students might work in such firms, no one should suggest that we sacrifice their interests in order to do a less than thorough job of teaching all students legal research.²¹ And in any case, were the legal academy to make curricular decisions based on the number of students who engage in the studied subject in their law practice, the results would jeopardize numerous doctrinal staples which have great pedagogical value but little practical application for most students once they enter law practice.

The more complex question to answer is why the data seem to support Hardy's claims that legal research is not especially important to practitioners. Hardy's observation that smaller firms are less concerned with legal research might be part of the answer,²² but it does not explain why research skills seem so unimportant to the practicing lawyers in the Garth and Martin survey. Nor can it explain the precipitous drop in esteem legal research suffered in the ten years between the Zemans and Rosenblum and Garth and Martin surveys.²³

An answer might lie in the way all firms, except the very smallest, allocate research projects. These tend to be assigned to junior lawyers²⁴ and therefore are important ways for junior lawyers to demonstrate competence in a number of ways: skill in interrogating research resources; quality of analysis; clarity of thinking, by developing an efficient

²⁰ *Id.*

²¹ Hardy claims not to oppose improvements in legal research programs, and only wants those involved in research pedagogy to have "a realistic understanding" of why research programs are not better than they are. *Id.* at 223-24. But Hardy's assumption that students enter practice as poor researchers because research programs are bad founders on its *post hoc, ergo propter hoc* logic. In fact, many law students who have studied under the finest teachers, in doctrinal as well as skills-based courses, have graduated with a less than perfect understanding of the subjects they studied.

²² For attorneys practicing in relatively stable areas of the law, experience, treatises, and specialized continuing legal education programs might be sufficient to keep them up-to-date with developments and might provide a sufficient understanding of the law in those areas.

²³ Even Garth and Martin concede that "the decline in the relative importance of research into facts and law is difficult for us to explain." *Garth and Martin*, at 25.

²⁴ Indeed, some law firms have gone even further, and have taken to "outsourcing" legal research. See, e.g., Lori Tripoli, *Another Chip Off Market Share . . . How and Why Outsourced Legal Research can make Inroads on Law Firm Turf* 19 *Of Counsel*, v. 5, 2 (2000)(describing the success of one legal research provider, LRN, that experienced growth from sixteen employees to seventy employees in just over a year, and that performs legal research and analysis for major corporations, including GE, International Paper, McDonald's, Procter & Gamble, Motorola, and Mobil). And such outsourcing might soon be extended to include overseas entrepreneurs offering legal research services to U.S. law firms at cut-rate prices. See, e.g., Daniel Brook, *Made in India: Are Your Lawyers in New York or New Delhi?* *Legal Affairs*, May/June 2005 (A copy of this article is available at http://www.legalaffairs.org/issues/May-June-2005/scene_brook_mayjun05.msp)(describing, among others, a legal outsourcing company named Lexadigm which offers legal research rates of between "\$65 to \$95 an hour for work that large U.S. firms might bill at \$250 an hour or more."

and effective research strategy; and writing ability, demonstrated by reducing the results of the research to readable form.

And this is perhaps why legal research is not listed as an important factor in the drive to law firm partnership.²⁵ Although it is likely true that those being considered for partnership will not be performing much legal research, and therefore would not register on a survey considering such factors, it is likely also true that inefficient or inadequate legal researchers will not remain at the firm long enough to be considered for partnership. It would be a foolish associate indeed, therefore, who ignored the benefits of efficient research skills.

B. The Link Between Legal Research and Reading

We will return to the role legal research plays in a junior attorney's life in a moment. But legal research is important to law students for another, less tangible, reason than employment success, one that is directly related to the debate over research media. Reduced to its essence, the legal research process is where law students first experience the framing of a legal issue from a given set of facts and then exploring legal doctrine within the factual context of the problem. In effect, legal research is where law students first begin to think of the law in a problem-solving light and where, in true Kingsfieldian terms, they begin to think like lawyers. Felix Frankfurter's 1930 description of the process cannot be improved upon:

[R]esearch requires the poetic quality of the imagination that sees significance and relation where others are indifferent or find unrelatedness; the synthetic quality of fusing items theretofore in isolation; above all the prophetic quality of piercing the future, by knowing what questions to put and what directions to give to inquiry.²⁶

Frankfurter's definition of the legal research process,²⁷ with its emphasis on research as an active process, closely parallels what we know about the reading process.²⁸ We

²⁵ Garth and Martin, at Table 12.

²⁶ Felix Frankfurter, *The Conditions for, and the Aims and Methods of, Legal Research* 15 Iowa L. Rev. 129, 134 (1930), quoted by Morris L. Cohen, Robert C. Berring, and Kent C. Olson, *How to Find the Law*, ("Cohen") 591 (9th ed. 1989).

²⁷ Not, he cautions, a "method" or an "object," but rather a "behavior," "the systematic indulgence of one's curiosity." Frankfurter, 15 Iowa L. Rev. at 130. Frankfurter was speaking, of course, of the kind of legal research performed by scholars, and his comments were the prelude to an espousal of the formalist position of the law as science. For a critique of the predominantly formalist bias in legal research education, and an illustration of a legal realist-based approach to the subject, see Thomas M. McDonnell, *Playing Beyond the Rules: A Realist and Rhetoric-Based Approach to Researching the Law and Solving Legal Problems*, 67 U. Mo. K.C. L. Rev. 285 (1999). The present article is no place to get drawn into the formalist/realist debate, and I will simply note that I am committing one of the cardinal sins of the legal researcher by quoting my source completely out of context. Nonetheless, Frankfurter's description of research behavior is so apt in the sense I am discussing here that I hope to be forgiven.

²⁸ The core of the Socratic teaching method, as that term is understood in law teaching at least, involves the same textual interrogation process as that encouraged by reading experts. In the classroom,

know, for example, that reading is best undertaken as an active rather than a passive activity.²⁹ Effective readers engage and interact with a text, “constructing new information from the exchange that occurs between the writer (who has a message to transmit) and the reader (who brings some knowledge to the interaction and leaves with new understandings.)”³⁰

This description of effective reading practice is very similar to Frankfurter’s ideal research “behavior:” the active construction of new meaning from presently existing information. And it is a behavior with which students are increasingly unfamiliar as they come into the study of law, a situation that has caused what can perhaps best be seen as a culture clash between students, the “Google generation” as I call them here,³¹ and the traditionalists who, for a few years longer at least, inhabit law firms and legal research faculties.

III. THE CULTURE CLASH BETWEEN THE TRADITIONALISTS AND THE GOOGLE GENERATION

For those of us whose learning strategies were fully formed prior to 1981,³² book reading was central to learning. Accordingly, we have a natural tendency to favor a legal research approach that emphasizes a book-based approach. For our students, though, books are substantially less important than they were to us and electronic research has been a successful strategy for them up to the point where they encounter legal research instruction.

teachers question the texts through the medium of the students in an attempt to elucidate the underlying legal principles illustrated by the text. This acts as a model for the students to employ when they read cases for the next class – things go more smoothly for the teacher, and certainly for the interrogated student, if the student has read the case with the questions the teacher might ask firmly in mind. For a contrary view, arguing that the Langedellian method and legal research are antithetical, see Thomas A. Woxland, *Why Can’t Johnny Research? or It All Started with Christopher Columbus Langdell*, 81 Law Libr. J. 451 (1989).

²⁹ See, Ruth Ann McKinney, *Reading Like an Lawyer: Time-Saving Strategies for Reading Law Like an Expert*, 51-55 (Carolina Academic Press 2005).

³⁰ Id. at 62, citing Elizabeth Fajans & Mary R. Falk, *Against the Tyranny of Paraphrase: Talking Back to Texts*, 78 Cornell L. Rev. 163 (1993), Laurel Currie Oates, *Beating the Odds: Reading Strategies of Law Students Admitted Through Alternative Admissions Programs*, 82 Iowa L. Rev. 139 (1997), Michael Pressley & Peter Afflerbach, *Verbal Protocols of Reading* (1995), Jeffrey D. Wilhelm, *Improving Comprehension with Think-Aloud Strategies* (2001). For a comprehensive view of the importance of critical reading skills to law students, see Debra Moss Curtis, Judith R. Karp, “In A Case, In A Book, They Will Not Take A Second Look!” *Critical Reading In The Legal Writing Classroom*, 41 Willamette L. Rev. 293 (2005).

³¹ I use this term, rather than referring to law students by their generational name – Baby Boomers, Generation Xers, or Millenials – because it refers to a specific research tool rather than a cluster of character traits. Google is the most ubiquitous internet search engine at the time of writing and it is likely that most present and incoming law students use it on a regular basis.. Given the pace of development in the internet world however, it is likely that its use will seem, at best, quaintly archaic within a few years. Should that happen, the reader is invited to substitute the name of whatever search engine is presently popular, assuming, of course, that search engine technology has not itself been replaced.

³² Many would date the personal computing revolution to 1981 when IBM first started marketing its “Personal Computer” or “PC.” Depending on one’s personal preference, one might also push the date a little later, to 1984, when Apple started to market the Macintosh. The World Wide Web was launched ten years after that, and the internet phase of the personal computing revolution had begun.

It is logical, therefore, for them to believe that their teachers are simply out of touch with the way things are now, and while they might hear what their teachers say about the importance of book-based research, it is unclear whether they really believe what they hear.

A. The Traditionalists

The traditionalist view of legal research has, at its core, the firm conviction that book-based legal research is superior to electronic research, at least as a first step in almost any research project. This traditionalist approach is rooted in the history of American legal research and the limited nature of the resources available to lawyers until recently.

The reporting of court decisions in America dates from 1789, when Ephraim Kirby³³ and Francis Hopkinson³⁴ both produced books containing case reports.³⁵ Early volumes of court decisions were generated by reporters from their own notes and impressions of court proceedings rather than reflecting an official record of proceedings.³⁶ This haphazard state of affairs changed slowly, with official reporters first being appointed in Massachusetts in 1804,³⁷ the United States Supreme Court in 1817³⁸ and Pennsylvania not until 1845.³⁹ Even then, legal research as a discipline was unknown: lawyers had to read all the opinions a court issued in order to know what the law in that particular jurisdiction was, and they had to annotate those opinions to keep themselves up-to-date.

Systemized legal research developed out of the increased complexity of the legal universe in late Nineteenth Century America and the entrepreneurial spirit of those times. In 1879, John B. West, a businessman from Massachusetts who had settled in St. Paul Minnesota, responding to a perceived need to make available the ever-increasing number of opinions from various courts, began to publish a compendium of opinions from courts in Northwestern states, covering Iowa, Minnesota, Michigan, Nebraska, Wisconsin and the Dakota Territory.⁴⁰ West's innovation, which covered all state and federal jurisdictions within ten years of its inception,⁴¹ was followed in 1897 by his digesting sets which contained synopses of a case's principal holdings, organized by West's "key number system," an indexing tool with which all American lawyers have become familiar.⁴²

The West system was a sophisticated research tool that allowed lawyers to locate cases from a growing number of jurisdictions that related to a very specific topic, but it was purely historical in nature: one could not confidently determine whether a case was still good law

³³ *Reports of Cases Adjudged in the Superior Court of the State of Connecticut from the Year 1785 to 1788* (Collier & Adam, 1789).

³⁴ *Judgments in the Admiralty of Pennsylvania* (Dobson & Lang 1789).

³⁵ Morris L. Cohen, Robert C. Berring, and Kent C. Olson, *How to Find the Law* (Ninth Edition) ("Cohen"), 17 (West 1989).

³⁶ *Id.*

³⁷ *Id.*

³⁸ *Id. at 18.*

³⁹ *Id.*

⁴⁰ Lynn Foster and Bruce Kennedy, *Technological Developments in Legal Research*, 2 J. App. Practice & Process ("Foster & Kennedy") 275, 276 (2000).

⁴¹ *Id.*

⁴² *Id. at 277.*

or whether it was overturned a year after being decided using the West key number system alone. That piece of the puzzle, however, had already been solved by Frank Shepard in 1873. Shepard began selling strips of paper – “annotation pasters” – that updated the fate of cases in the Illinois Reports.⁴³ These strips developed into the familiar Shepard’s citators that are only now vanishing from law libraries.

A variety of secondary sources sprang up to aid lawyers in researching the law. Legal encyclopedias, such as Corpus Juris⁴⁴ and Ruling Case Law,⁴⁵ the Annotated Reports,⁴⁶ treatises on a variety of topics, Restatements,⁴⁷ and legal periodicals all summarize and comment on the law. The traditionalist research paradigm quickly developed, in which lawyers learned to use these secondary sources first in order to develop a broad understanding of an issue and to generate search terms that would drive their exploration of the West digests using the key number system. Only once these secondary sources had been utilized would lawyers move to the primary sources to find controlling and persuasive precedent.

Mark Herrmann has set out the traditionalist’s view of legal research clearly and succinctly. In a piece discussing what he calls “The Ten Most Common Mistaken Assumptions Made By New Lawyers,”⁴⁸ Herrmann notes that “[m]ost new lawyers begin their legal research by turning on a computer. This is almost invariably wrong. When you work for me, do not begin your research with a computerized database unless I expressly tell you to do so.”⁴⁹

The reason for his antipathy to computerized research at the beginning of a project,⁵⁰ Herrmann tells us, is the inability of legal researchers searching primary law databases to map out the general contours of an area of law before they search for individual landmarks in that area.⁵¹ Accordingly, he notes, young associates in contemporary law firms should first utilize paper-based secondary sources such as treatises, then move on to case digests

⁴³ *Id.*, citing, Thomas A. Woxland & Patti J. Ogden, *Landmarks in American Legal Publishing: An Exhibit Catalog* 43 (West Publishing Co.).

⁴⁴ First published in 1911. *Cohen*, at 387.

⁴⁵ First published in 1914. *Id.* at 391. Ruling Case Law was superseded by American Jurisprudence, or Am. Jur., as it has universally come to be known, in 1936. *Id.*

⁴⁶ First published in 1908. Frederick C. Hicks, *Materials and Methods of Legal Research* (3d Edition) at 144-45 (Lawyer’s Co-Operative Publishing Company 1942). The Annotated Reports became the more familiar American Law Reports, or A.L.R., in 1919. *Id.*

⁴⁷ The Restatement series first began publication in 1932. Arthur S. Beardsley and Oscar C. Orman, *Legal Bibliography and the Use of Law Books* (2d Edition), 341 (Foundation Press 1947).

⁴⁸ Mark Herrmann and Myriam E. Gilles, *This Is What I’m Thinking: A Dialogue Between Partner And Associate*, 25 *Litigation* 8 (1998).

⁴⁹ *Id.* at 64.

⁵⁰ Herrmann does not espouse quite as traditionalist a position as it might at first appear. Later in his article he notes that legal research is never finished until the results have been updated and complete by use of a computerized search. *Id.* at 64.

⁵¹ In fact, Herrmann’s argument is illogical, mixing medium and method. He assumes that computerized research must mean the interrogation of primary databases as its first and only step, whereas both Lexis and Westlaw have extensive secondary source databases that allow electronic researchers to conduct the same ‘secondary source first, primary source second’ research model as that advocated by paper researchers. Despite this error, however, Herrmann’s article is an articulate statement of the traditionalist view of legal research.

before reading cases.⁵² The same research tools, in other words, that lawyers have been using for over a century.

Herrmann's rationale closely mirrors that of many legal writing teachers. In response to an email posting requesting teachers' views on how legal research pedagogy should respond to the challenge to print resources posed by electronic information retrieval systems,⁵³ the consensus favored the continued teaching of print-based material for "traditionalist" reasons. One responder specifically acknowledged the cultural importance of print materials, noting that "[b]ecause print materials are organized by topic – broadly and narrowly – researching in print materials helps students learn how lawyers have traditionally thought about the law."⁵⁴ Others agreed with Herrmann's observation that students are insufficiently knowledgeable about the law to use online research as a first step. "Given the existence of annotated statutes, annotated restatements, treatises and hornbooks, encyclopedias, and digests, I can't fathom how anyone could [begin] research on a topic with which he or she is unfamiliar online."⁵⁵ Finally, teachers emphasized the cost of the electronic services and the restrictions on use that students might find in legal practice.⁵⁶

The traditionalist viewpoint, then, appears to be based on some deep and widely-held convictions. There are pedagogical and practical reasons for this position, and the cultural significance of learning the same tools and research patterns as previous generations of lawyers is something to be recognized and respected. Whether or not this traditionalist position is supported by empirical data and whether it represents contemporary best practices is, for the purposes of this article, irrelevant. What seems clear is that it is a widespread, if not the prevalent, view held by practitioners and teachers of legal research. And it stands directly in contrast to the views held by contemporary law students.

B. The Google Generation

Contemporary law students are likely to have little sympathy with the underlying premise of the traditionalist position – that paper-based research resources are inherently more effective than electronic databases and that they are more efficient to use.⁵⁷ Assuming that first year

⁵² *Id.* at 64.

⁵³ Posting by Ian Gallacher to LWIONLINE, September 30, 2002, 3:33 p.m.

⁵⁴ Posting by Marcia McCormick to LWIONLINE, September 30, 2002, 3:42 p.m.

⁵⁵ Posting by Peter Friedman to LWIONLINE, October 1, 2002. As one would expect from a legal research teacher, Professor Friedman did not repeat Herrmann's logical mis-step, noting that the print resources "depend for their utility on the medium of the book" and that their "convenience cannot be duplicated online." *Id.*

⁵⁶ *See, e.g.,* posting by James Ley to LWIONLINE, September 30, 2002, 4:24 p.m. ("On a more practical level, I heard from several students who completed clerkships this past summer with large Denver firms that many clients insisted they use books rather than on line tools because everyone is so cost conscious these days.") and posting by Mitchell Nathanson, posting to LWIONLINE, September 30, 2002, 4:42 p.m. ("Frankly, many of our clients would have been horrified to see a Westlaw charge show up on their bill.")

⁵⁷ Theodore Potter quotes one of his first year students, speaking of her first assignment using a legal encyclopedia: "I can't make this work to complete my assignment; I'm a computer person." Theodore A. Potter, *A New Twist on an Old Plot: Legal Research is a Strategy, Not a Format*, 92 Law Libr. J. 287, 287 (2000).

law students have an average age of 24,⁵⁸ we have reached the point where law students cannot remember a time when computers were not an integral part of their academic lives. Contemporary law students have grown up around computers, have used them primarily to attain the high level of academic achievement necessary to enter law school, and seem mistrustful both of physical libraries⁵⁹ and of those who extol their virtues.

Although it was impossible to tell at the time, the relatively small universe of legal information retrieval began a dramatic expansion in 1973, the year Mead Data Central first introduced the Lexis database.⁶⁰ At first, neither Lexis nor Westlaw – introduced in 1975 by West Publishing as competition to Lexis⁶¹ – appeared to pose a challenge to print materials for legal research. Computers were not household items in the mid 1970s and the notion that a computer could ever have sufficient, convenient, storage capacity to replace a library would have been thought ridiculous.

The advent of the computer chip, and the ability to store more and more information in a smaller and smaller space, has meant that computers now occupy the central societal role with which we are all familiar. And the impact of these technological advances on our students has been profound. Whereas only twelve years ago the library was the only place for undergraduate students to research the information necessary to write term papers or perform other independent research, the majority of students recently surveyed by the Pew Internet and American Life Project used the internet as a primary research source.⁶² The study revealed that 73% of students used the internet more than the library to acquire information, while only 9% used the library more.⁶³

⁵⁸ The average age of the Syracuse University Class of 2006 is 24. Other schools' average class age might differ, but the differences are unlikely to be relevant to the question of how familiar the average entering first year law student has been with computer technology.

⁵⁹ "Many students do not think the law library is an exciting place." James B. Levy, *Escape to Alcatraz: What Self-Guided Museum Tours Can Show Us About Teaching Legal Research*, 44 N.Y. L.Sch. L. Rev. 387, 391 (2001)(citing Leon A. Jakobvits & Diane Nahl Jakobvits, *Learning the Library: Taxonomy of Skills and Errors*, 48 C. & Res. Libr. 203, 206 (1987) "A user's negative bias towards the library is automatic.").

⁶⁰ Grossman at 82. For a description of the process that led up to the creation of LEXIS, see William G. Harrington, *A Brief History of Computer-Assisted Legal Research*, 77 Law Libr. J. 543 (1984-85). Harrington, the research counsel for the Ohio State Bar Association in 1965 volunteered to take charge of the project that, eight years later, led to the unveiling of the LEXIS database. *Id.* at 545. Among the many fascinating insights into the process he offers, the decision over the database's name stands out. Not named, as might be supposed, as a combination of "LEX" for "law" and "IS" for "information system, the name "originated with a firm of consultants in New York whose business it was to suggest corporate and business names. Their theory was that names with an X or two in the middle (such as EXXON) were intriguing. Hence LEXIS." *Id.* at 552. Harrington does not explain why a unique product like LEXIS needed any more intrigue than it already must have carried in 1973.

⁶¹ *Id.*

⁶² Pew Internet & American Life Project: *The Internet Goes to College: How Students are Living in the Future with Today's Technology*, 12 (September 15, 2002) accessed at <http://www.pewinternet.org/> (last accessed May 15, 2003). The study's margin of error is ± 3.5 . It seemed appropriate to use the internet to locate statistics related to students' relationship with the internet.

⁶³ *Id.* In addition, 16% believed they used the internet and the library about the same, and 2% did not know which resource they used more.

Even when students used a university's library facilities, the Pew study reviewing college students' research habits found that the internet was still dominant.

During direct observations of college students' use of the Internet in a library and in campus computer labs, it was noted that the majority of students' time was not spent using the library resources online. Rather, email use, instant messaging and Web-surfing dominated students' computer activity in the library. Almost every student that was observed checked his or her email while in the computer labs, but very few were observed surfing university-based or library Web sites. Those students who were using the computer lab to do academic-related work made use of commercial search engines rather than university and library Web sites.⁶⁴

It appears that many undergraduate students rely on research habits acquired before coming to college. Another Pew study showed that 94% of online teens have used the Internet for school research, and 71% used it as a major source for a recent school project.⁶⁵

Unsurprisingly, students believe the internet to be a positive influence, with 34.3% strongly agreeing with the somewhat imprecise proposition that "[t]he internet has had a positive impact on my college academic experience in general," 44.2% indicating agreement, 16% neutral, and only 3.5% disagreeing or strongly disagreeing.⁶⁶

This increase in internet reliance comes at a time when books are quickly falling out of favor in American society.⁶⁷ A recent study performed by the National Endowment For The Arts concluded that whereas in 1992, 60.9% of the population had read at least one book in the previous year, by 2002 that percentage had dropped to 56.6%.⁶⁸ The decline was even worse when the researchers studied literary reading: from 54% in 1992 to 46.7% in 2002.⁶⁹ And the decline is accelerating. In the years from 1982-1992, the decline for literary reading was 2.9%,⁷⁰ but between 1992 and 2002 the decline was measured at 7.3%.⁷¹ Most significantly, when the study looked at people in our students' age group – 18-24 year olds – it found that only 42.8% engaged in literary reading, a decline of 28% in 20 years.⁷² These results caused the study's authors to conclude that "at the current rate of loss, literary reading as a leisure activity will virtually disappear in half a century."⁷³

⁶⁴ *Id.* at 13.

⁶⁵ *Id.*, quoting, *Teenage Life Online*, a Pew Internet & American Life Project report published in June 2001 (available at <http://www.pewinternet.org/reports/toc/asp?Report=36>).

⁶⁶ *Id.* Once again, 2% responded that they did not know.

⁶⁷ Whether or not the internet is responsible for this decline in interest in books, or whether we are simply becoming a less literate society, is unclear and the data do not speak to this question.

⁶⁸ National Endowment for the Arts, *Reading at Risk: A Survey of Literary Reading in America*, at ix (2004), available at <http://www.nea.gov/pub/ReadingatRisk.pdf>.

⁶⁹ *Id.*

⁷⁰ *Id.* at x.

⁷¹ *Id.*

⁷² *Id.* at xi.

⁷³ *Id.* at xiii.

These study results are in harmony with the empirical data regarding law student library usage. Data from a Georgetown University Law Library study shows that student photocopying – an indicator of paper-based research – climbed steadily through the mid-1990s, from 2,784,247 copies made in the academic year 1989-90 to 3,225,228 copies in 1993-94, and then declined precipitously thereafter, dropping to 2,699,334 in 1994-95 down to 1,564,181 in 1998-99.⁷⁴

The authors of the study correlated these findings with shelving statistics that are another indicator of book usage in a library, and the pattern was the same. The number of books shelved rose from 203,669 in 1989-90 to 263,050 in 1991-92.⁷⁵ From there, the numbers dropped steadily to 96,601 in 1998-99.⁷⁶ As these numbers demonstrate, our students may still be using law libraries, but the way in which they are using them has changed dramatically.⁷⁷ They are comfortable with the internet, uncomfortable with books and libraries, and are headed for an unpleasant rendezvous with the traditionalists who still inhabit law firms, and who have very different ideas about the relative merits of books and electronic legal research.⁷⁸

⁷⁴ Gary J. Bravy & K. Celeste Feather, *The Impact Of Electronic Access On Basic Library Services: One Academic Law Library's Experience*, 93 Law Libr. J. 261, 262-3 (2001).

⁷⁵ *Id.* at 265

⁷⁶ *Id.*

⁷⁷ Even though law libraries are adapting to meet the needs of their users, they likely will not be abandoning print-based legal information in the near future. For a full exploration of the importance of both print and computer-based information, see Michelle M. Wu, *Why Print and Electronic Resources are Essential to the Academic Law Library*, 97 Law Libr. J. 233 (2005).

⁷⁸ A further measure of law students' dependence on electronic resources can be found in a short report by the Robert Crown Law Library of Stanford University Law School. A survey of law students in 2002 shows that nineteen percent of the first year survey responders stated that they did 100% of their legal research online, seventy-five percent of the first year responders claimed that they did 80% of their legal research online, and sixty-two percent of all law students claimed that they did 80% or more of their legal research online. Erica V. Wayne and J. Paul Lornio, *Book Lovers Beware: A Survey of Online Research Habits of Stanford Law Students*, at 6-7 (Robert Crown Law Library Legal Research Paper Series, Research Paper No. 2 (June 2005)). The next year, fifteen percent of first year responders claimed they did 100% of their legal research online, eighty-three percent of first year responders performed at least 80% of their legal research online, and seventy percent of all law students claimed they performed at least 80% of their legal research online. *Id.* at 8. And in 2004, the last year covered by the study (and a year in which the survey parameters changed somewhat, although not in ways that undercut the value of the data), fourteen percent of first year responders claimed to do 100% of their legal research online, ninety-three percent of first year responders claimed to do at least 80% of their legal research online, and seventy-nine percent of all law students claimed to do at least 80% of their legal research online. *Id.* at 11. Perhaps no anecdote more firmly establishes the primacy of electronic research techniques in law students' minds than does the one included in the conclusion of this Stanford study. One group of students, instructed to use library resources to find the statute of limitations for fraud in California, went directly to the computers housed in the library – and therefore, presumably, library resources under a broad interpretation of the term – and “‘Googled’ their way to the answer.” *Id.* at 14-15. Although included as an “amusing” anecdote by the authors (*id.* at 14), some might choose to interpret it in a different light.

IV. ADDRESSING THE CHALLENGES OF TEACHING LEGAL RESEARCH TODAY

But if reading – active reading that creates new meaning – is such a useful model for research behavior, then these numbers are profoundly disturbing to legal research teachers⁷⁹ because they indicate that not only are law students irretrievably married to computers as their primary research tool, they might no longer be coming to law school with the skills necessary even to understand the vocabulary we use to describe the research process. And here we come to the heart of the problem, the same one experienced by the troubled aliens in “The Hitchhiker’s Guide to the Galaxy.” We are fast becoming a population of researchers who can ask questions but have insufficient information to understand the answers we receive. The irony is that we, like Douglas Adams’s aliens, are the victims of our own success. As Thomas Keefe has noted, “[t]he Internet has made it so easy to *find* information that students often do not know how to *search* for it.”⁸⁰

Contemporary legal research is a complicated subject. The mechanics of conducting that research are difficult enough for law students who might not be as sophisticated in research technique as they might imagine, but the context within which legal research is conducted in law practice means that efficient, effective research skills are expected by legal employers.⁸¹ The rest of this article focuses on strategies legal research teachers might employ when teaching those skills.

I suggest several possible approaches, each of them independent from the others. Not all of these will work in all research programs, and in some programs none of these strategies might be viable or desirable. In particular, I propose several strategies that legal research programs might use to help students develop the full range of research skills they will need to thrive in practice, and which focus on ways to persuade students that book-based research is not an entirely vestigial element of law practice. Regardless of the approach taken however, legal research programs should find ways to confront the cultural and technical issues flowing from the information revolution that continues to change the way we all think about legal research.

⁷⁹ The numbers are, of course, no less disturbing to legal writing teachers who must try to resurrect dormant writing skills within students who are not constantly stimulated by good, or even mediocre, writing.

⁸⁰ Thomas Keefe, *Teaching Legal Research from the Inside Out*, 97 Law Libr. J. 117, 122 (2005)(emphasis in original).

⁸¹ The Garth and Martin study, showing that ninety-two percent of those polled believed that library research was a skill that students should bring to practice from law schools, and eighty-four percent believed the same for computerized research, shows that however research skills are valued in the marketplace, legal employers definitely expect their incoming associates to possess those skills.

A. When to Teach Legal Research

The threshold question to answer is when legal research should be taught. Though most programs teach legal research during the first year of law school,⁸² and for practical reasons this likely will remain the approach favored by most schools, it poses problems of which legal research teachers are aware but which can be countered with careful curricular preparation.

There are several challenges to teaching legal research to first year law students. Berring and Vanden Heuvel describe the process as “trying to teach the wrong people the wrong material at the wrong time,”⁸³ and while this is overstated, there is a kernel of truth in their assessment. The students, certainly, could be described as “the wrong people” in that they are often still grappling to come to terms with the doctrine they are learning in other classes and have not fully assimilated such fundamental concepts as court hierarchy, the concept of precedent, and sometimes are fuzzy on the relationship between state and federal courts – all liabilities for the legal researcher.

Berring and Vanden Heuvel’s solution to this problem is the suggestion that law schools provide minimal research instruction in the first year:

First-year law students need some basic sessions orienting them to the library, some general lectures on sources of law, and perhaps a bit of help on legal citation practice. Couple such measures with a book such as the Wrens’ . . . *Legal Research Manual* [C. Wren & J. Wren, *The Legal Research Manual* (2d ed. 1986)] or Morris Cohen’s *Legal Research in a Nutshell* [M. Cohen, *Legal Research in a Nutshell* (4th ed. 1985)], and you will be giving first-year students a decent grounding in the basics.⁸⁴

The real research education, Berring and Vanden Heuvel contend, should occur in an upper-level class during the students’ second year.⁸⁵ Not only are the students better equipped to understand the material once they have worked their way through the first-year curriculum, they are also motivated to learn about legal research because they will have worked in a law-related job over the summer between their first and second years, will have realized that they are inadequate legal researchers, and “are often angry that their first-year research class left them unprepared and misinformed.”⁸⁶

⁸² The 2005 ALWD/LWI survey shows that 142 responders indicated that legal research and writing instruction were integrated in their programs and forty-nine indicated that the subjects were taught separately. ALWD/LWI Survey at 9. Although not definitive, this is a strong indication that primary research education happens during the first year of law school.

⁸³ Berring and Vanden Heuvel, at 441.

⁸⁴ Id. at 441-42.

⁸⁵ Id. at 442.

⁸⁶ Id.

There is something to this proposal. Legal research is certainly too large a topic to be covered in its entirety as part of a first year writing class, and there is a crucial role for upper-level research programs to play in all law schools.⁸⁷ But designing a first-year research curriculum that leaves students “unprepared and misinformed” makes them “angry” is poor pedagogy and is, in any case, a wasted opportunity. Even if it only provides a grounding in research, a first-year legal research program can play a valuable role in the students’ development as lawyers.

This is not to say that Berring and Vanden Heuvel are completely wrong, especially when they note that many law schools are unable, or unwilling, to devote sufficient time to the teaching of legal research or that first-year students often “lack the needed context to profit from a fully integrated course.”⁸⁸ The answer, though, is to come up with ways to devote more time to the subject at a point where the students are better equipped to understand it.⁸⁹

One possible approach, in a program where research and writing are integrated, is to leave legal research instruction out of the first semester and then emphasizing it during the second. This allows the students to focus on writing issues exclusively during the first semester while acquiring some of the context necessary to better understand the research process. And by elevating legal research to a prominent role in the second semester, this approach allows research to step out of the shadow of legal writing and acquire its own importance, both in the curriculum and in the students’ minds.

This approach – halfway between Berring and Vanden Heuvel’s upper-level proposal and the more traditional legal research program, where print-based research materials are taught in the first semester and computer-based materials in the second semester⁹⁰ – is not a perfect

⁸⁷ The Berring and Vanden Heuvel article sets out the possible parameters of such a program based on their experience at the University of California School of Law, Boalt Hall, Berkeley, California. *Id.* at 441-448. Another, more extensive, treatment of the same issue can be found in Lucia Ann Silecchia, *Designing and Teaching Advanced Legal Research and Writing Courses*, 33 Duq. L. Rev. 203 (1995). See also, Ann Hemmens, *Advanced Legal Research Courses: A Survey of ABA-Accredited Law Schools*, 94 Law Libr. J. 209 (2002).

⁸⁸ *Berring and Vanden Heuvel*, at 442.

⁸⁹ This is not to say that law schools should not offer advanced legal research courses. On the contrary, they are highly desirable classes that have a beneficial impact on a law students’ development and in some specialty areas, such as tax, they are crucial.

⁹⁰ The 2004 survey conducted jointly by the Association of Legal Writing Directors and the Legal Writing Institute shows that in schools where research instruction was integrated with writing, seventy-one schools offered limited Westlaw and Lexis training in the first semester, forty-four offered unlimited training, and ninety offered unlimited training in the second semester. There were eleven “other” responses. Association of Legal Writing Directors & Legal Writing Institute, *2004 Survey*, 89 (2004). In programs where research was taught separately from writing, twenty-nine programs offered limited Westlaw and Lexis training in the first semester, sixteen offered unlimited training in the first semester, and thirty-six offered unlimited training in the second semester. *Id.* By “training,” I assume the survey respondents included access. The numbers for those who offered limited training in the first semester might be misleadingly high, and might not indicate that Westlaw and Lexis were being used by students for research purposes in the first semester. Any school, for example, that requires its students to use the “TWEN” (“The West Educational Network”) course management program in the first semester of law school would likely also include limited Westlaw training and would therefore be a positive responder in this category, even though Westlaw was not used for legal research. In other schools, pressure from other constituencies, such as career services offices, might require limited access to Westlaw and Lexis, and

solution. Students are only halfway through laying the doctrinal groundwork that would be ideal before they tackled research, for example, and emphasizing research in the second semester of the first year might cause at least some students to forget what they learned about legal writing in the first semester.⁹¹

But legal research is one of the subjects that can help students develop the connections necessary to “think like a lawyer,” the imprinting process described by Berring and Vanden Heuvel.⁹² As we have seen,⁹³ proper research behavior will help students interact with legal texts in a way that complements their doctrinal education. Depriving students of this opportunity to integrate reading, analysis, and expression would be a significant disservice.

In any case, though, Berring and Vanden Heuvel’s proposal that students receive virtually nothing in the way of legal research education is unworkable – for the vast majority of schools anyway – for the very reason they identify. In order to gain a competitive advantage in an ever-increasingly difficult job market, most students seek law-related employment between the first and second years of law school. These jobs – whether paid or unpaid – are seen as crucial stepping-stones to employment in the summer between the second and third year of law school and, from there, into the world of full-time employment after graduation. Failure in those post first-year summer jobs is seen as a significant setback for a student’s long-term employment opportunities.⁹⁴

Even if the importance of these summer employment opportunities is overstated by students, the negative perception of both the student and the law school created by a student’s poor showing of research skill is an unacceptable result.⁹⁵ Students not only represent themselves when they seek summer work, they represent their law schools as well. It is a legal research program’s responsibility to ensure that both student and school are seen in the best possible light and that, in turn, mandates that legal research be taken seriously in the first year of law school.

therefore limited training as well, without permitting students to conduct legal research using these databases.

⁹¹ Although this second problem is a serious one, its effects can be ameliorated by moving the students as quickly as possible back into the writing process, this time with research as part of the mix. A series of written assignments, with increasingly complex research problems built into them, should serve to remind students about the writing lessons they learned in the first semester. For a thoughtful discussion on how to develop sequenced research problems that “offer increasing challenges while supporting success, and encouraging reflection on and planning of legal research” see, Terry Jean Seligman, *Beyond “Bingo! Educating Legal Researchers as Problem Solvers*, 26 Wm. Mitchell L. Rev. 179 (2000).

⁹² The “imprinting process” is one whereby “students learn jargon and how to frame issues according to some version of legal doctrine.” *Berring and Vanden Heuvel*, at 442.

⁹³ See, nn. 25-29 and accompanying text.

⁹⁴ Whether or not this perception comports with reality is difficult to say and is, in any case, irrelevant. It is the students’ perceptions I am speaking of here.

⁹⁵ Lest anyone doubt that a student’s poor performance is significant to a law school’s reputation, it is important to remember that many legal employers of first-year summer students are the same alumni schools count on during fund-raising efforts.

B. Who Should Teach Legal Research

Although it seems certain that legal research will be taught in the first year of law school, the question of who should be teaching it is less clear. The 2005 ALWD/LWI survey shows that the most programs (eighty-four) have research and writing taught by the same teachers, with law librarians teaching with writing teachers in fifty-three programs, librarians teaching alone in thirty-seven programs, teaching assistants in twenty programs and twelve programs using some other model.⁹⁶ In addition, many programs use representatives from Westlaw and Lexis/Nexis to teach, or to help teach, computer-assisted legal research technique.⁹⁷ None of these models is perfect, but some have more disadvantages than others.

1. Teaching Assistant and Doctrinal Faculty-Taught Legal Research

Having legal research taught by teaching assistants is probably the least successful approach⁹⁸ to research education.⁹⁹ This model, which might (perhaps unfairly) be termed the “blind leading the blind” approach, might have had some validity in the days when research resources were relatively limited and the fundamental concepts of research technique were familiar to students who had mastered them as undergraduate or graduate students. But those days are now gone, never to return and, as Berring and Vanden Heuvel note, such an approach is “doomed to produce meager, often negative results.”¹⁰⁰

The results are likely no better if the student-taught research component is folded into a class taught by a doctrinal professor. Berring and Vanden Heuvel are probably right to observe that such an approach will inevitably result in research taking “a backseat to whatever is occurring in the ‘substantive’ class,”¹⁰¹ and that “the message that research is on the periphery of the first-year experience, that research is not highly valued, will come through loud and clear.”¹⁰² Legal research is far too important a subject, both for the students’ education and for their professional well-being, to be marginalized in such a manner.

⁹⁶ ALWD/LWI Survey, at 9.

⁹⁷ In 1993, Marilyn Walter concluded that West had “some involvement in teaching first-year students in about 80 percent of law schools,” although if pre-summer-job training was included “the figure is closer to 95 percent. Marilyn Walter, *Retaking Control of Teaching Research*, 43 J. Legal Educ. 569, 581 n. 80 (1993). Mead Data Central provided 100 percent of Lexis training in 55 percent of the country’s law schools and 50 to 95 percent of the training at 31 percent of law schools. *Id.*

⁹⁸ Without further information, it is impossible to comment on the ten programs using an “other” approach.

⁹⁹ In the interests of full disclosure, I was taught legal research by a teaching assistant and, in turn, taught legal research as a teaching assistant in my second year of law school. Although I am grateful to the student who taught me for devoting so much time and energy to the class, and to the students I taught for being so patient and forbearing, I cannot say that I learned much of what I now know about legal research while a student or a teaching assistant.

¹⁰⁰ Berring and Vanden Heuvel, at 438.

¹⁰¹ *Id.* at 440. Indeed, in some ways it would be a disservice to the students if this were not the case. Doctrinal subjects are complex and difficult for first-year students to penetrate. Doctrinal teachers are perfectly correct to want every minute of the time students spend in their class to be devoted to as full and deep an understanding of that subject as possible. Introducing another complex topic into the class seems designed to create the worst of both worlds, drawing time away from consideration of doctrine without being able to spend enough time adequately to cover research technique.

¹⁰² *Id.*

2. Librarian-Taught Legal Research

Of the remaining models, a research program taught by librarians has some obvious advantages. Librarians are information professionals, taught to understand and interrogate the resources at a legal researcher's disposal, and they might be, as Berring and Vanden Heuvel assert, the "most knowledgeable, experienced, and capable researchers at any law school or law firm. . . ." ¹⁰³ And there is no question that in sharing that knowledge with law students, they can provide a unique and valuable perspective on legal research.

But there are some drawbacks to this model as well. As Berring and Vanden Heuvel note, teaching research is not always part of a law librarian's job description, and unless law schools provide necessary support "in terms of status, compensation, and time" ¹⁰⁴ it is neither feasible nor fair to ask them to assume that role. Moreover, some librarians might prefer not to step from the library into the classroom. And the full-time of maintaining and running the law school's library cannot be devolved to others. ¹⁰⁵

In addition to these logistical problems inherent, however, is the more troubling question of what type of legal research we should be teaching. Berring and Vanden Heuvel discuss at length their ideal model for an advanced legal research program and the "pathfinder" exercise, the final advanced legal research project that serves as a "capping, integrative experience that trains students to truly understand the research process." ¹⁰⁶ This project, a "guide to the research resources in a particular subject area," ¹⁰⁷ require students to present the important research resources relating to the subject, showing the reader the research process and evaluating the quality and usefulness of the various resources. "Some are heavily case – and statute-oriented, while others . . . barely include any strictly 'legal' research at all." ¹⁰⁸

Viewed from a strictly academic or library science perspective, this approach to legal research is both fascinating and valuable. It opens teacher and student up to a world of possibilities and allows legal research to become the transformative experience it can and should be. ¹⁰⁹ But from a practitioner's perspective, this form of research training could be

¹⁰³ *Id.* at 447. The qualification is mine.

¹⁰⁴ *Id.* at 448.

¹⁰⁵ I speak here only of those schools who have not yet addresses these issues. In schools where librarians were hired with the understanding that teaching would be part of the job description, and where sufficient librarians have been hired to both fulfill the teaching role and keep the library functioning, these problems should not exist.

¹⁰⁶ *Id.* at 447.

¹⁰⁷ *Id.*

¹⁰⁸ *Id.* at 446.

¹⁰⁹ Berring and Vanden Heuvel discuss many of the benefits they see from this approach to legal research education in their article. *Id.* at 445-48. In particular, they note that by participating in a "pathfinder" research project, "[s]tudents are encouraged to see law as a catalyst for action and their research as a method for achieving change. We want them to use their research not just to find the law as it is, but also how it could be." *Id.* at 446.

disastrous if it were the only available pedagogical approach.¹¹⁰ In order to provide a balanced approach that allows for both the practical and academic approaches to legal research, therefore, having legal research taught by both librarians and legal writing teachers appears to be the best plan.¹¹¹

3. Legal Writing Faculty-Taught Legal Research

Legal writing teachers might not be as well trained as librarians in legal bibliography or information theory, but they often have more experience as legal researchers in the context of law practice, the place most law students will be using the research techniques they learn in law school.¹¹² More importantly, by virtue of the writing assignments they assign, legal writing teachers can integrate research and writing, thereby demonstrating to students how dynamic a process legal analysis should be. In this model, familiar to most experienced writing teachers, students given a writing assignment must develop a research strategy designed to produce a practical result, either predictive of a court's ruling or seeking to persuade a court of a position. When the research strategy produces no results or unanticipated results, the students must modify the strategy. And after the research generates positive results, and the students begin to write, they should discover gaps in their research or reasoning that need to be plugged.

In this way, moving from research to analysis and back, students learn the importance of establishing a hypothesis of what the law likely will be in a particular area, as well as the importance of intellectual flexibility when the research results appear to conflict with the hypothesis. And this lesson can best be taught, and learned, in conjunction with writing assignments in which the end results of the research process manifest themselves.

4. Vendor-Based Legal Research Instruction

Regardless of who within the legal academy bears the responsibility for teaching legal research, there is another significant influence we must consider. The two principal players in the legal information market, Westlaw and Lexis/Nexis, have access to first-year law students, often providing them with training on their respective systems. This practice, if not carefully monitored by faculty, can lead to undesirable results.

We should begin by considering the obvious; the packaging and distribution of legal information is undeniably big business. The United States legal information market is worth in excess of \$5 billion per year, and has been growing at an annual rate of 5% in recent years.¹¹³ Of the many publishers of legal information, three – Thomson Corporation (West)

¹¹⁰ For a discussion of the differences between the ways librarians and practicing lawyers might approach legal research, see Michael J. Lynch, *An Impossible Task but Everybody Has to So It: Teaching Legal Research in Law Schools*, 89 Law Libr. J. 415 (1997).

¹¹¹ Again, in the interests of full disclosure, I am a legal writing teacher who also teaches research. I have no training as a legal librarian.

¹¹² I have no empirical support for this statement and can only offer my own, anecdotal, impression that most of the legal writing teachers I know have spent considerable time either in government or private practice or as judicial law clerks, positions where fast, accurate, and complete legal research is crucial.

¹¹³ *Morgan Report*, at 3.

at 38%, Reed Elsevier (Lexis/Nexis) at 27% and Wolters Kluwer (Aspen/Loislaw) at 15% – control 80% of the market.¹¹⁴ Of these big three, Westlaw and Lexis/Nexis are the most established as computer-assisted legal research providers and have much more extensive databases than Loislaw.¹¹⁵

The academic market is important to West¹¹⁶ and Lexis/Nexis.¹¹⁷ And both West and Lexis/Nexis strive to maintain a visible presence in law school. Both appoint student representatives who man tables at lunch hours and perform other services, both have professional representatives assigned to law schools who make periodic visits to the school, often bringing bagels, coffee, and other treats. By far their most significant undertaking, though, is their role in teaching computer-assisted legal research.

This practice began at a time when legal research teachers were themselves in need of CALR training and the vendor representatives were more experienced and more proficient at using the new programs.¹¹⁸ By 1993, West had “some involvement in teaching first-year students in about 80 percent of law schools. . . .”¹¹⁹ The number increased to closer to 95 percent if pre-summer job training was included.¹²⁰ Lexis’s involvement in training was no less extensive, providing 100 percent of Lexis training at 55 percent of the country’s law

¹¹⁴ *Id.* The “legal and regulatory” branch of the Thomson Corporation brought in \$3.3 billion in 2004 revenue. Thomson Corporation website, available at http://www.thomson.com/corp/about/ab_home.jsp (accessed July 12, 2005). By comparison, the “learning” branch brought in \$2.2 billion, the “financial” branch brought in \$1.7 billion, and the “scientific and healthcare” branch brought in \$934 million. *Id.* Lexis/Nexis in North America brought in £949 million in 2004 revenue, approximately \$1.7 billion based on currency rates prevailing on July 12, 2005. Reed Elsevier, Annual Review 2004, LexisNexis, at 4, available at <http://www.reed-elsevier.com/index.cfm?articleid=1251&CFID=56440364&CFTOKEN=83714817&jsessionid=da302916871121174033081> (accessed July 12, 2005).

¹¹⁵ Loislaw lacks coverage of federal trial court decisions, making it a poor research choice for anyone seeking to practice in federal court and limiting its usefulness to anyone seeking a complete picture of state law, since they will miss any non-binding but still informative federal court decisions interpreting state law. And although Aspen makes its service available to law students, it has not been as aggressive as Westlaw or Lexis/Nexis in seeking to influence law students to use its computer-assisted legal research product.

¹¹⁶ I refer to these companies here as West and Lexis/Nexis, although West is more properly thought of as part of the Thomson Corporation and Lexis/Nexis is part of Mead Data Central which is, itself, part of Reed Elsevier PLC.

¹¹⁷ One fifth of Westlaw usage is attributable to academic use. Telephone conversation with Bill Benish, Director, Academic Account Management, and Chris Parton, Director, Academic Segment Marketing for West Group (July 14, 2005). Because of the impact the academic market can have on peak capacity – an impact experienced when a large group of law students around the country begin researching at the same time using Westlaw – the academic market plays a “huge” role in Westlaw’s infrastructure investment. *Id.*

¹¹⁸ Brooklyn Law School developed a CALR training program in 1991 in which its legal writing teachers taught both Westlaw and Lexis (as it was then known) to first-year law students. Marilyn Walter, the director of the Brooklyn program, noted in 1993 that this was “not an easy transition” because many of the teachers “had received law degrees before CALR instruction was even contemplated in law schools. Most of us were comfortable with one of the computer systems, but no one was proficient in both.” Marilyn Walter, *Retaking Control over Legal Research*, 43 J. Legal Educ. 569, 581 (1993). Legal writing teachers today should be at least conversant with both Lexis/Nexis and Westlaw, as well as Loislaw and the numerous free and low cost legal information services.

¹¹⁹ *Id.*

¹²⁰ *Id.*

schools, and 50 to 95 percent of the training at 31 percent of the law schools.”¹²¹ It is unlikely that the situation has changed significantly since these numbers were reported.

What has changed, however, are the incentive programs offered by both Westlaw and Lexis for students who use their products. The Westlaw program allows students to accumulate points by visiting Westlaw – a maximum of twice a day or seven times a week – and conducting a “research activity.”¹²² Students can also play “Westlaw trivia” after signing out of a Westlaw research session at the same frequency of two times per day or seven times a week.¹²³ In addition, Westlaw gives 25,000 points to five winners during “KeyCite Sweepstakes”¹²⁴ months (February, March, and April), and receive bonus points by opening Westlaw Rewards emails, going to Westlaw training sessions, or by participating in local incentives offered by Westlaw academic representatives at their school.¹²⁵ Students can redeem their accumulated Westlaw Rewards points for a variety of items, including textbooks,¹²⁶ a \$50 Bar/Bri rebate,¹²⁷ a Coach Legacy Slim Leather Duffle¹²⁸ a pearl necklace,¹²⁹ and a Calloway Big Bertha driver (for men or women).¹³⁰

Some attempts have been made to persuade students that their use of computer-assisted legal research products should not result in personal gain. A pilot program at the Washington College of Law in 2003-04, whereby students could donate any or all accumulated “points” to the school’s Equal Justice Foundation, an organization that raised funds to help defray tuition expenses for students who committed to practice public interest law after graduation, however, met with only limited success.¹³¹ A more recent program, permitting students to donate their “points” to a charity providing relief for the Christmas 2004 tsunami in the Indian Ocean “exceeded expectations.”¹³²

¹²¹ *Id.*

¹²² <http://www.lawschool.westlaw.com>, accessed July 25, 2005 (printouts of the relevant web pages on file with the author). The information about the Westlaw Rewards program is not viewable using a Westlaw faculty account number because West has created different start-up screens for law students and faculty members. I was given a student password by Westlaw after requesting information about the rewards program.

¹²³ *Id.* Even if a student gets some questions wrong in this trivia game, the student can still earn “the top bonus level” thanks to “Email extra credit.” *Id.*

¹²⁴ This is a separate promotional tool aimed at getting students to use KeyCite. Students can win a \$2,500 wardrobe from Brooks Brothers, a large screen television, or a Bose sound system.

¹²⁵ *Id.*

¹²⁶ *Id.* The books on offer appear to cover the legal academic output of West and Foundation Press, a company owned by West. The Cohen, Berring, Olson research book cited in this article is available for 2,325 points while the audio CD of Robert Berring’s *Sum and Substance Audio Set on Legal Research, Legal Information, and the First Year of Law School* is available for 3,425 points. *Id.*

¹²⁷ *Id.* This \$50 rebate costs a student 3,000 points.

¹²⁸ Valued at 11,900 points. *Id.*

¹²⁹ Valued at 17,644 points. *Id.*

¹³⁰ Valued at 13,702 points. *Id.*

¹³¹ The author proposed this program, which was supported by both West and Lexis/Nexis.

¹³² Telephone conversation with Bill Benish, Director, Academic Account Management, and Chris Parton, Director, Academic Segment Marketing for West Group (July 14, 2005)

These rewards programs illustrate the dangers associated with vendor-based computer-assisted legal research instruction. Although the account representatives who provide training might well act professionally, and might think of themselves as attorneys and instructors first and company representatives second,¹³³ both companies are using sophisticated marketing ploys to persuade students to use their products.¹³⁴

In order to help first-year law students resist these blandishments, legal research teachers must involve themselves as closely as possible with all phases of the students' research instruction, including computer-assisted legal research. This is not to say that there is no place for the vendors in the first-year research program,¹³⁵ just that this place is not as the exclusive providers of computer-assisted research instruction.¹³⁶

C. What to Teach

Deciding what to teach in a first year legal research class is not an easy task. Students must learn, at a minimum, what the principal, secondary, and primary sources of law are in both paper and electronic form, and they must learn how to use those sources in a coordinated way. And as we have seen, the students are not coming to the study of legal research as clean slates. Most of them are heavily biased in favor of computerized research and many might be, at best, inattentive to a discussion of print-based research tools. So in addition to helping students construct a toolkit that will help them be efficient legal researchers, legal research teachers must also deconstruct some underlying prejudices the students might have in favor of computers and against the books.

¹³³ *Id.* Indeed West account representatives are instructed not to "push" Westlaw and are trained not to draw comparisons between Westlaw and Lexis/Nexis. *Id.*

¹³⁴ And not just students. Teachers are courted with a different set of incentives and, once again in the interests of full disclosure, I should reveal that much of this article was written using pens provided by both West and Lexis/Nexis, on a notepad provided by Foundation Press, a company also owned by Thomson, and was transported to and from my office in a briefcase celebrating Keycite, West's case citator service. Briefcases advertising Westlaw were handed out at the 2005 Annual General Meeting of the Association of American Law Schools and the 2005 Biannual meeting of the Association of Legal Writing Directors, and the Journal of Legal Education, the scholarly journal in which many articles concerning legal research appear, is "printed and distributed to law teachers as a public service by West Group and Foundation Press." Although law teachers are perhaps not as compromised in their relationship with legal publishers as are doctors with the pharmaceutical industry, the comparison is uncomfortably close.

¹³⁵ Even Marilyn Walter, who in 1993 advocated "Retaking Control over Teaching Research," 43 J. Legal Educ. 569 (1993), allowed vendor representatives to provide advanced instruction on their services in collaboration with library staff. *Id.* at 571. Another approach is to use the vendor representatives to provide a short introductory session and then have the legal research faculty teach the mechanics of computer-assisted legal research, preferably with both Lexis/Nexis and Westlaw taught simultaneously.

¹³⁶ West and Lexis/Nexis appear to have grown towards this position themselves. West feels that its account representatives are most effective when acting in partnership with legal research faculty rather than shouldering the load of computer-assisted research instruction alone. Telephone conversation with Bill Benish, Director, Academic Account Management, and Chris Parton, Director, Academic Segment Marketing for West Group (July 14, 2005). Showing first-year students, who likely suspect their teachers of harboring overt or covert "traditionalist" sympathies, that they are skilled in computer-assisted legal research helps to cloak legal research teachers with some much-needed credibility when they speak of the dangers as well as the benefits of computer use in legal research.

One of the most important steps in this deconstruction process is to show students how print and computer resources are organized. This information is the key to understanding the profound differences between print-based and computer assisted legal research. And while the concept of indexing might appear simple and straightforward to those raised in the days of print-based learning, they are not necessarily as self-evident to contemporary first-year law students.

1. Indexing the Law

At the end of the movie “Raiders of the Lost Ark,” the Ark in question – a religiously-significant artifact with a disturbing tendency to vaporize those who open it – is boxed and stored in what we assume to be a U.S. government archive. As the camera pans back, we see that the Ark is to be stored with thousands of identical boxes, all unmarked. We are left with the impression that it will be impossible to find the Ark again and that it is, in essence, being hidden in plain sight.

First-year law students can be forgiven for believing that the same fate awaits a court decision that is bound up in one of the thousands of court reporters they see lining the walls of the library.¹³⁷ But unlike the movie Ark of the Covenant, legal decisions are indexed before they are published and those indexes form the basis of pre-computer legal research.

The two principal indexing systems with which lawyers are familiar are West’s “digest” approach and the A.L.R. “annotation” approach. Under the West system, a team of editors read cases, extract the sometimes numerous legal principles discussed in the decision, and categorize them according to a predetermined grid of legal topics, subtopics, sub-subtopics, and so on, with division being assigned a “key number.” Each subdivided legal principle is gathered up and printed both at the top of each case published in West reporters and also one of a number of jurisdictional and chronological digests.¹³⁸ The annotation approach focuses on leading cases that articulate legal principles and gathers around those leading cases others with related facts or law.¹³⁹

The central feature of these different approaches is the same: a human has read the case in question, compared it to other cases or rules, and has categorized it in relation to the vast body of extant law. In essence, the researcher has entered the case into a huge index. And by learning how to use this index, a legal researcher can find relevant case law quickly and efficiently. The differences between using the index at back of a book and this legal index are minimal, and are mainly concerned with the large scale of the indexed material.¹⁴⁰

¹³⁷ Maureen Kordesh describes the reaction of a law student upon seeing lawyers on television or in the movies working against a background of thick law books. “‘Oh my God, I’m going to have to read all those books or that lawyer (the one in the picture) will have me for lunch, or maybe even just an appetizer.’” Maureen Straub Kordesh, *Navigating the Dark Morass: A First-Year Student’s Guide to the Library*, 19 Campbell L. Rev. 115, 115 (1996).

¹³⁸ For a full discussion of the West digesting process, see Cohen et al, *How to Find the Law*, at 83-110.

¹³⁹ For a discussion of the annotation approach, see *id.* at 115-135.

¹⁴⁰ A more comprehensive discussion of legal indexing can be found in Daniel P. Dabney, *The Curse of Thamuz: An Analysis of Full-Text Document Retrieval*, 78 Law Libr. J. 5, 9-14 (1986).

The benefits of pre-indexing the law are readily apparent. Rather than the legal researcher having to read and assimilate the information in each book of primary law, the researcher can become familiar with an indexing system¹⁴¹ and find law relevant to the research topic quickly and easily.¹⁴² But pre-indexing also presents several significant problems to legal researchers about which first-year students should also be aware.

The first of these problems is readily comprehended. Each editor employed by West is an individual forced to make often razor-sharp distinctions between one categorization and another. Without calling into question either the ability or the motivation of these editors, and recognizing the numerous safeguards West has in place to ensure quality control of its digesting decisions, it is inevitable that some cases discussing legal rules relevant to a particular research topic will be indexed in different places in the West digest system. The careful researcher accounts for this and does not limit a search to only one category or subcategory. Nonetheless, some relevant cases will likely go unfound in each digest-based search.

The second problem of pre-indexed research, while much subtler and perhaps more difficult for first-year law students to comprehend, is substantially more significant. Put simply, a pre-indexing system, by its terms, limits research to the parameters of the index. And this operates to the detriment of the legal researcher in two ways: first, it categorizes law in a formalistic series of rigid and pre-defined areas which might not correspond to a more realist-based evaluation of the relationships between cases¹⁴³; and second, it renders searching of non-indexed case elements impossible.¹⁴⁴

¹⁴¹ The West system prevailed over the annotation approach, although ALRs are still valuable research tools and some researchers, especially those with some pre-knowledge of the research topic, prefer the more extensive and reflective quality of the annotations.

¹⁴² Certainly paper research cannot be performed at the same speed as a computerized search. But students should be reminded that legal research is conducted in law-time, a variant of normal time unknown to Einstein. In law-time, or more properly, private practice law-time, any law-related action taken on behalf of a client fills the space of the minimum billing unit used by the attorney's firm. Thus, in most firms that bill for time, a computerized search that takes two minutes of normal time to generate a result is recorded as 0.1, or six minutes, of law-time. If the same research task took five minutes to accomplish using print-based research materials, the difference would be three extra minutes of normal time but there would be no difference in the amount of law-time taken. This is not to minimize the importance of speed in legal research, or to argue that print-based research is as "fast" as computerized research, but it does place the concept of "speed" in the proper context of law practice, the place where much legal research will be conducted.

¹⁴³ Not all see this as a negative trait. Robert Berring, for example, makes a cogent argument that the world of legal information is degenerating into "information anarchy" and that what is required is a new form of classification, a reconceptualization of legal information structure so that it once again resembles a "coherent fabric." Robert C. Berring, *Legal Research and the World of Thinkable Thoughts*, 2 J. App. Prac. & Proc. 305 (2000).

¹⁴⁴ If one wants to research, for example, the number of Supreme Court cases in which Justice Scalia has used the term "original intent" one could not use the West digest system because Judge, or Justice, names are not part of the West digest. By contrast, a Westlaw search in the Supreme Court database returned three cases in a matter of seconds.

The problems caused by pre-indexing have been well-known to lawyers for many years and were, in part, the impetus behind the development of computer-assisted legal research.¹⁴⁵ The index-free nature of these databases allows lawyers to search in ways that could not be imagined in the days before computerized legal research, thereby offering some distinct benefits over print-based research.

But the absence of pre-indexing¹⁴⁶ can itself cause new problems for the researcher. Any errors in the indexing process will render the results useless,¹⁴⁷ and the ad hoc form of indexing performed by computers is entirely dependent on the terms selected by the researcher to be indexed.¹⁴⁸ So although print-based legal research tools, with their pre-indexed research modality, have some conceptual limitations,¹⁴⁹ they still possess some advantages over the freer interface offered by Lexis/Nexis and Westlaw.¹⁵⁰

¹⁴⁵ Lexis, the first of these two behemoth full-text legal information databases, was intentionally developed as a non-indexed database. “Members of the Ohio Bar who worked to develop LEXIS defined what they wanted as a ‘nonindexed, full-text, on-line, interactive, computer-assisted legal research service.’” McDermott, 78 Law Libr. J. at 338, quoting, William G. Harrington, *A Brief History of Computer-Assisted Legal Research*, 77 Law Libr. J. 543, 545 (1984-85). Westlaw also meets this definition. The absence of pre-indexing was a crucial element in the development of these databases. To the lawyers working to develop the Lexis database “Boolean-logic searching, in effect, would allow each researcher to create an ad hoc index specific to the problem at hand.” *Id.* at 546. Ironically, the same Ohio bar that was so influential in starting Lexis is now leading the flight away from the high-priced computer-assisted legal research services. “The Ohio State Bar Association and Lawriter Corporation have co-ventured to produce the latest . . . alternative for computer-assisted online research.” Charles F. Huxsaw, *CASEMAKER Legal Research Phenomenon Rolls Across Nation*” *The “Commoditization” of Fundamental Legal Resource is at Hand*, 29 Altman Weil Report to Legal Management 4 (April 2002). CASEMAKER is a legal research product that is marketed only to bar associations. *Id.* at 5. While its coverage is difficult to determine, the cost certainly is lower than Lexis/Nexis -- \$20 per year, for example, to Nebraska bar members. *Id.*

¹⁴⁶ It is not strictly correct to say that contemporary versions of Westlaw and Lexis/Nexis are non-indexed. Both services allow the user to perform index searches of primary law databases in much the same way that users could perform digest searches in print. And the availability of electronic versions of other indexes, such as the ALR series, means that the researcher can replicate the pre-indexed research strategies inherent in print research if so desired.

¹⁴⁷ As anyone who has mistyped a word during a Boolean search will surely agree. For data on the problems misspelling can cause, see Walters, 43 J. Legal Educ. at 575, n. 40, citing John Doyle, *Misspellings in LEXIS and WESTLAW: A Statistical Test*, 1 Trends L. Libr. Mgmt. & Tech. 5 (1989)(from 350,000 cases in which a test word was used, Lexis had 556 cases in which the test word was misspelled and Westlaw had 276); Thomas Woxland, *More on Misspellings in CALR Databases*, 3 Trends L. Libr. Mgmt. & Tech. 1, 2 (1990)(concluding that common misspellings of familiar legal terms resulted in missing up to 10 percent of relevant cases.)

¹⁴⁸ English is a synonym-rich language and this diversity presents problems for the legal researcher, who must guess what terms the courts might have used to discuss the issue. The interstitial meaning caused by what Dabney calls the “syntactical relationships between the words” is another significant problem for the computer-based legal researcher. See, Dabney, 78 Law Libr. J. at 18-20.

¹⁴⁹ A researcher using the print digest method of research is limited by the indexer’s understanding of the case and the indexing vocabulary. As most lawyers have at one time or other discovered, some West key number designations of case holdings can, at best, be described as whimsical. Even if the indexer is correct in attributing a particular key number or equivalent to a holding, complex searches, such as holding and ruling judge, are impossible.

¹⁵⁰ Harrington noted that “[i]t is amusing today to recall the furor this proposition [of a non-indexed database] engendered when it was released for discussion. Self-appointed experts pronounced a nonindexed system a major error. Many law librarians were appalled to learn that the new concept of

2. Hidden Problems of Computer-Assisted Legal Research

This discussion of legal indexing leads naturally into a discussion of the benefits and problems associated with computers in the legal research process. The benefits of computers are undeniable and should not be understated. But they also can be the cause of the poor research skills demonstrated by first-year law students.

Keefe and others point the finger of blame for this lack of research skill at search engines like Google.¹⁵¹

Google . . . has taught us that it is no longer necessary to go through the effort of defining our information need. We just put a word or two into the search box and let a search engine disambiguate the query and provide an answer. We have learned to look through some possible results, and hope that we recognize the "right" site from within the first page or two of results. We have given up on the need to think through the reason for our query, or to clearly articulate the gap in our information; instead, like Supreme Court Justice Potter Stewart famously said about pornography, we may not be able to define what we're looking for, but we'll know it when we see it.¹⁵²

But the Google type of search engine, in which the user's natural language search is translated behind the scenes into a form of Boolean query which then interrogates the spidered world wide web, is not alone in generating problems for the researcher. Boolean logic presents its own series of problems for the legal researcher and helping students to understand the problems, as well as the benefits, of computer-assisted legal research is crucial to their development as well-rounded legal researchers.

computer-assisted research would operate free of their dearly beloved, elaborate structures of digests and indexes. Some of them were intemperate in their scorn. Harrington, 77 Law Libr. J. at 546. But, as noted, even these services now offer pre-index possibilities as well. Perhaps the initial critics of the LEXIS system were not so wrong after all.

¹⁵¹ Google is an easy target because of its current popularity. It is, of course, unfair and naïve to blame the instrumentality when the fault lies with the operator. But even a superficial understanding of how Google operates should show why it is an unsuitable medium for complex legal research. Google "spiders," or searches, the world wide web constantly in order that it might be able to "return[] pages based on the number of sites linking to them and how often they are visited, indicating their popularity." Mary J. Koshollek, "Google" *Your Way to Better Web Searching*, 76 Wis. Law 32, 33 (July 2003). Thus, while Google is a valuable tool for retrieving information that many others also have sought, it is less helpful at retrieving less often viewed, but potentially relevant, material. As Robert Berring has noted, the transplantation of the Google search engine into the legal information world, a step that is by no means unlikely, would mean that "the old structure [of legal information recovery] will not be replaced by anything other than the precepts of advertising." Robert C. Berring, *Legal Research and the World of Thinkable Thoughts*, 2 J. App. Prac. & Proc. 305, 316 (2000).

¹⁵² Mary Ellen Bates, *Is That All?* ECONTENT (October 27, 2003), available at <http://www.econtentmag.com/Articles/ArticlePrint.aspx?ArticleID=5579&ContextSubtypeID=13>.

a. Balancing Precision and Completeness

In text retrieval using Boolean queries¹⁵³ such as those performed by lawyers using Lexis/Nexis and Westlaw, “increased recall is gained only at the expense of a loss of precision, and vice versa.”¹⁵⁴ What this means in practical terms is that when a search generates a large number of documents, it will likely also find many documents that are irrelevant to the search. The problem has been summed up succinctly by Christopher and Jill Wren.

[S]uppose a database of 1,000 documents contains 100 documents you would consider relevant to your research problem. If your search request retrieves 60 of these 100 relevant documents, the recall measurement for your request would be 60 percent. If your search request also retrieves 180 irrelevant documents along with the 60 relevant documents (for a total of 240 retrieved documents), the precision measurement for your search request would be 25 percent – that is, 60 relevant documents out of 240 retrieved documents. Thus your search request would have a relatively high level of recall (retrieving 6 out of every 10 potentially relevant documents) and a relatively low level of precision (with only one out of every four documents retrieved being relevant.)¹⁵⁵

This relationship between retrieval and precision does not alter when one becomes a more experienced researcher. All attorneys using electronic database searching to generate search results must accept the fact that a very precise search will generate a low number of cases and that not all cases relevant to the research will have been recovered. This, in turn, might lead the attorney to construct searches that are intentionally broader than they might be in order to increase the retrieval rate, a relatively inefficient method of conducting research.

The empirical research on successful computer-based text searching is not encouraging reading for lawyers. In fact, it indicates that even experienced researchers frequently fail to find relevant documents during the course of their searches. In a 1985 study, two researchers evaluated the results of searches conducted in a 350,000 page database.¹⁵⁶

¹⁵³ Boolean logic is named after George Boole, the British mathematician whose explorations into symbolic logic helped computer scientists to develop the familiar search strategies in full-text databases like Lexis/Nexis and Westlaw. *Walters*, 43 J. Legal Educ. at 569, n.1. Both Westlaw and Lexis/Nexis also have alternative, “natural language” search engines. When a user types in a question or list of terms using this form of searching, the computer identifies key concepts, removes irrelevant words (“the,” “and” and so on) expands root concepts, and then searches the database. *Id.* at 572, n. 19. In essence, the natural language search function acts as a translation matrix, turning a series of words into a Boolean search before interrogating the database. Results are based on frequency of the searched terms within the document. *Id.*

¹⁵⁴ Jon Bing, *Performance of Legal Text Retrieval Systems: The Curse of Boole*, 79 Law. Libr. J. 187, 196 (1987), *quoted in*, Christopher G. Wren & Jill Robinson Wren, *Using Computers in Legal Research: A Guide to Lexis and Westlaw* (“Wren & Wren”) at 767 (1994).

¹⁵⁵ Wren & Wren at 767.

¹⁵⁶ David C. Blair & M. E. Maron, *An Evaluation of Retrieval Effectiveness for a Full-Text Document-Retrieval System*, 20 Comm. Ass’n. Computing Machinery 289 (1985), *quoted in*, Wren & Wren, at 769.

The researchers used in the study were familiar with the contents of the database,¹⁵⁷ and a search was considered successful when the subject concluded that he or she had recovered 75 percent of the relevant documents (as measured by the “relevance” and “retrieval” yardsticks discussed above).¹⁵⁸

After the searches were completed, the researchers then evaluated the perceived successful results to determine the actual success. The results indicated that although an average of 79 out of every 100 documents retrieved were relevant (thus indicating that the searches had a high level of precision), the searches only retrieved an average of 20 out of every 100 documents: 20 percent instead of the 75 percent the subjects thought were being retrieved.¹⁵⁹

This study should sound a cautionary note for anyone who believes in the relative superiority of computerized legal information systems. Even experienced researchers have difficulty evaluating how successful their searches have been. “The total number of relevant documents found by a search usually can be determined, but the number of relevant documents in a collection *not* found by a search is seldom known.”¹⁶⁰

Most importantly, electronic researchers should remember that when they retrieve a high number of relevant documents with a search, they will likely also have recovered many irrelevant documents, and that this equation will not change in their favor as they become more experienced as legal researchers.

For legal researchers, the situation might not be quite as dire as the data appear to indicate. The administrators of both Westlaw and Lexis/Nexis reacted to Dabney’s use of this data, claiming that the data failed to account for the refinements both of their programs contain.¹⁶¹ Nonetheless, a recognition of the inherent limitations of computer-assisted legal research should lead the properly cautious first-year law student to the understanding that a mix of computerized and print-based legal research strategies offers the best chance for a complete and accurate search result.

¹⁵⁷ Another difference that would skew the results in favor of the researchers when comparing this survey with the experience of average legal researchers.

¹⁵⁸ *Id.*

¹⁵⁹ *Id.*

¹⁶⁰ Daniel P. Dabney, *The Curse of Thamus: An Analysis of Full-Text Legal Document Retrieval* 78 Law Libr. J. 5, 16 (1986)(emphasis in original).

¹⁶¹ Jo McDermott, *Another Analysis of Full-Text Legal Document Retrieval*, 78 Law Libr. J. 337 (1986)(Mead Data Central’s response); Craig E. Runde & William H. Lindberg, *The Curse of Thamos: A Response*, 78 Law Libr. J. 345 (1986)(West’s response). Dabney responded to these responses, noting that a then-ongoing study of legal information databases at the University of Texas had generated data that tended to confirm Blair and Maron’s original findings. Daniel P. Dabney, *A Reply to West Publishing Company and Mead Data Central on the Curse of Thamos*, 78 Law Libr. J. 349 (1986).

b. Information Access

Even if the computer-based legal researcher could steer a course through the tricky waters between precision and completeness and could, under ideal circumstances, recover all relevant information, circumstances are not always ideal. Computer based information retrieval systems suffer from information access problems in three additional areas: information availability, information retention, and information limitation. And although law students are likely to be generally familiar with these problems, they should be asked to confront them in the context of legal researchers.

i. Information Availability

Information availability is a readily understood problem. Put simply, if the publisher has problems maintaining access to its information, or if a researcher has trouble getting to the publisher's information, then the researcher will be unable to use that information for legal research. Thompson and Reed Elsevier, and the other publishers of legal information, work hard to insure that their information will be available at any time to those with proper access to it. Usually they succeed, although access can slow during times of high internet usage and maintenance can, on occasion, cause a service to be temporarily unavailable.¹⁶²

But as large corporations with high internet profiles, these publishers of Westlaw and Lexis/Nexis are, and will likely continue to be, targets for those who conduct denial-of-service attacks.¹⁶³ There is no doubt that the companies are taking whatever steps are possible to fend off such attacks, but a determined attacker might be successful in preventing access to one or both of these services at some point. Any service disruption would likely be of limited duration, but that might not be a comfort to a legal researcher working to finish the research on a soon-to-be-filed brief. Courts might be willing to accept bad weather, or even poor health, as reasons for granting a filing extension, but the inability to conduct Westlaw or Lexis research – tools that were likely unavailable to judges when they were in law school – will probably not move them.

¹⁶² Suzanne Rowe, Director of Legal Research and Writing at the University of Oregon, provides a graphic example of this problem. "[In Fall 1999] I gave my students the opportunity to complete Shepard's exercises using both Shepard's books and Shepard's Web site. Although the print research was time consuming, all students completed it. Many were unable to complete the Web part of the assignment by the deadline, however, because the server was down for the 24 hours preceding the due date." Suzanne E. Rowe, *Legal Research, Legal Writing, and Legal Analysis: Putting Law School into Practice*, 29 Stetson L. Rev. 1193 (2000).

¹⁶³ Such attacks are often thought of as a form of electronic civil disobedience. Giselle Fahimian, *How the IP Guerrillas Won: @TMark, Adbusters, Negativland, and the "Bullying Back" of Creative Freedom and Social Commentary*, ("Fahimian") 2004 Stan. Tech. L. Rev. 1, 23 (2004). "There is a . . . David-versus-Goliath-type enthusiasm surrounding these attacks, since they allow a few 'little guys' sitting at their computers to disable the websites of the largest corporations and most important government agencies." *Id.*

The internet itself is also prone to denial of service attacks. One such attack recently slowed internet use “dramatically” for hours.¹⁶⁴ The ability to access and retrieve legal information stored on the internet is susceptible to such attacks, whereas information stored in books, while subject to physical hazards such as fire and water damage, is insulated from external threats mounted from computers hundreds or even thousands of miles away.¹⁶⁵

ii. Information Retention

Books are inert information repositories, and are therefore also immune to information retention problems. By contrast, the internet is a volatile environment and information can be added or removed without any notice to the end user. One aspect of this problem is familiar to anyone who has clicked on a link to an apparently interesting website only to discover that the site is no longer available. This phenomenon – appropriately termed “link rot”¹⁶⁶ – can be frustrating but is unlikely to cause the skilled legal researcher, who has several alternative ways of locating information, much trouble.

More insidious, and troubling, is the systematic culling of information previously available on a continuing website. This practice was highlighted recently when it was revealed that federal government agencies were overhauling their websites to make them easier to use and to remove outdated material, but also to remove information that did not correspond to the Bush administration’s political agenda.¹⁶⁷ A directive sent to senior staff members in the Department of Education at the end of May, 2002, identified “problems” with the department’s website that included information “that does not reflect the priorities, philosophies, or goals of the present administration.”¹⁶⁸

Unpublished court opinions are particularly susceptible to removal without notice, as are superseded statutes.¹⁶⁹ And while anyone alert to the Orwellian tendencies of politicians seeking to recontextualize the past might now anticipate once-publicly available information vanishing down a virtual internet “memory hole”¹⁷⁰, only expert legal

¹⁶⁴ Ted Bridis, *Virus-Like Infection Slows Internet Traffic*, Washington Post January 25, 2003. The cost of a single such denial-of-service attack can exceed \$1 billion. Thomas Fedoreck, *Computers + Connectivity = New Opportunities for Criminals and Dilemmas for Investigators*, 76 N.Y. St. B. J. 10 (February, 2004).

¹⁶⁵ The membership of @Tmark, a “collective of media provocateurs and corporate saboteurs who have pulled some of the best-known cultural pranks of the past ten years” are “scattered across the world. . . .” *Fahimian*, 2004 Stan. Tech. L. Rev. at 7, 9.

¹⁶⁶ My thanks to Robert Oakley for introducing me to this term.

¹⁶⁷ Michelle R. Davis, *No URL Left Behind? Web Scrub Raises Concerns* (“Davies”) Education Week, September 18, 2002, located at <http://www.edweek.org/ew/ew_printstory.cfm?slug=03web.h22> (accessed May 18, 2003).

¹⁶⁸ *Id.*

¹⁶⁹ Even though not now operative, superseded statutes can have an important role to play in litigation that revolves around facts from the time a particular statute was still valid. They can also be invaluable in tracing the progress of the legislature’s thinking about a particular topic.

¹⁷⁰ “When one knew that any document was due for destruction, or even when one saw a scrap of waste paper lying about, it was an automatic action to lift the flap of the nearest memory hole and drop it in, whereupon it would be whirled away on a current of warm air to the enormous furnaces which were

researchers are likely to be aware of the online document retention policies of commercial electronic legal database providers.

This restriction of information is missing from print media. Once a book is printed and distributed its contents are unalterable without the owner's knowledge and consent.¹⁷¹ This problem of what information is retained and what is discarded leads directly to the third issue of information access, and it central to why we perform legal research in the first place.

iii. Information Limitation

At its most fundamental, we research the law because we cannot think about the law until we know what the law is. And if our access to legal information is limited, we cannot be sure that we have a complete understanding of what the law is. Put simply, our ability to think about the law is limited by the completeness of legal information at our disposal – if some aspect of that information is missing or restricted, we are prevented from thinking about that aspect of the law.

This is a powerful concept.¹⁷² If the availability of information on a particular topic guides our ability to formulate thoughts about that topic then our ability to think about the law is also hostage to the information limitation policies of those who provide us with information.¹⁷³ This has always been true: if a court failed to publish an opinion, and the opinion is unavailable in any other form, it is as if the opinion never existed for those of us who have no access to it. But the problem is more acute if the medium of information storage is as volatile as electronic data. Once an opinion is published and in a book, it

hidden somewhere in the recesses of the building.” George Orwell, *1984*, 35 Signet Classics edition (1949)

¹⁷¹ The problem of what is, and should be, printed, of course, remains even with books.

¹⁷² A graphic and tragic example of the power of this concept can be found in the medical realm. In July 2001 a Baltimore woman died after participating in an asthma experiment. Jonathan Bor & Tom Pelton, *Hopkins Faults Safety Lapses Panel says Volunteer likely Died from Drug Used in Asthma Study; Board, Researcher Blamed*, Baltimore Sun, July 17, 2001, accessible at <http://www.baltimoresun.com/bal-te.md.hopkins17jul17,0,5369216.story>. The woman was given a drug, hexamethonium, which was known to cause severe side effects, even death. *Id.* The doctor administering the study, however, failed to find the medical articles disclosing these potential side effects when he conducted his research prior to commencing the study. *Id.* The doctor primarily used an electronic database, PubMed, to do his research. *Id.* This database contains articles dating back to 1960, and therefore the doctor could not have found the articles concerning hexamethonium's potential side effects, since they were published in the 1950s. *Id.* Ironically, a search using Google would have linked the researcher to a French medical school's website that would, in turn, have linked the researcher to the relevant articles. *Id.* Although an example taken from a different discipline, this incident shows how the parameters of our understanding of an issue are limited by our information concerning the issue. If we fail to uncover all relevant facts we have a gap in our knowledge. And while mercifully in our discipline that rarely results in death or physical harm, reliance on electronic databases with limited coverage can also have serious repercussions for legal researchers.

¹⁷³ In discussing the dangers he sees in legal information being provided under the “Rupert Murdoch model,” Berring notes that “[t]he trivialization of legal thought that would result would be a nightmare.” *Berring*, at 317.

will remain accessible until all copies of that book are destroyed. But once information is removed from a database, it is unavailable and inaccessible unless it is restored.¹⁷⁴

Unlike in the physical library, where information contained in books, once bought, became the property of the library, ownership of information in the virtual library is closely held by the publisher. So providers of electronic information are free to add or subtract from databases at will because they retain ownership of that information. Legal researchers using, for example, Lexis or Westlaw can only purchase licenses that permit them access to the database.¹⁷⁵

At present, this does not appear to be a significant problem. Neither Thompson or Reed Elsevier, nor any other legal publisher, have given any reason to suspect them of nefarious schemes to restrict access to public information.¹⁷⁶ But the past is not an adequate gauge of the future. And only the most sanguine observer of the legal information market could believe that what Berring calls “the Rupert Murdoch scenario,”¹⁷⁷ in which “the legal information system could become hostage to the larger world of information commerce,”¹⁷⁸ is inconceivable. Certainly the economics of legal information, and the attractiveness of lawyer demographics, make this “nightmare”¹⁷⁹ situation a possibility.¹⁸⁰

¹⁷⁴ The problem is not limited to information removal. Some databases on Westlaw and Lexis/Nexis are incomplete, beginning on a certain date and failing to provide coverage before that date. I once asked a research assistant for any pre-1966 law review article that discussed in depth the issue of one-way intervention, a class action concept that, in part, caused the 1966 rewriting of Fed. R. Civ. P. 23. I was told that no such article existed. When I checked my research assistant’s search strategy, I discovered that it was limited to a search of Westlaw’s texts and periodicals database which did not extend back far enough to retrieve the articles that do indeed exist. This problem was relatively easy to spot and fix. It does, however, illustrate the dangers of relying on computer-assisted legal research without first establishing the boundaries of the accessible information.

¹⁷⁵ Micelle Wu notes another significant impact that licensing has on libraries. Whereas in a print library, failure to supplement a resource has no effect on the already-purchased materials, “failure to pay for a license in any single year results in the loss of not only the current data, but also the archive of previous years.” Michelle Wu, 97 Law Libr. J. at 243.

¹⁷⁶ Some would argue that a nefarious scheme is not necessary for computer-assisted legal research to have an impact on the way lawyers think. See, e.g., Ethan Katsh, *Law in a Digital World: Computer Networks and Cyberspace*, 38 Vill. L. Rev. 403, 442-43 (1993)(arguing that the way we use computers changes the way we seek and use information.) One limited survey, however, suggests that any identifiable changes in court opinions, and the analytical process they employ, cannot be attributed to computerized research. Paul Hellyer, *Assessing the Influence of Computer-Assisted Legal Research: A Study of California Supreme Court Opinions*, 97 Law Libr. J. 285 (2005). But while the results of this study are interesting, the small size of the sample – 180 randomly chosen opinions from the California Supreme Court dating from 1944 to 2003 – means that it cannot resolve the question of whether the use of computer-assisted legal research has changed the way lawyers think about the law.

¹⁷⁷ *Id.* at 316.

¹⁷⁸ *Id.* at 317.

¹⁷⁹ *Id.*

¹⁸⁰ The accidental omission – such as the failure of a researcher to recognize that a particular library does not extend back sufficiently far to find relevant information on a particular issue (in much the same way that the medical researcher failed to find articles that were not part of the medical database he searched) – is much more likely than the intentional limitation of information by the publisher at present, but the result is no less serious to the researcher or the researcher’s client.

D. A Client-Based Approach to Research Education

All this information helps to explain the benefits and problems associated with print-based and computer-assisted legal research. But without a context within which to make it relevant, law students will likely not understand why they are hearing it instead of learning to conduct legal research. One way of packaging this information that is of particular relevance to law students is to teach legal research as a client-based activity. Students naturally understand the importance of serving a law firm's clients, but I am using the concept of "client" much more broadly here, to mean not only a law firm's external clients but also internal clients in the form of partners and senior associates. These lawyers are the first users of a junior lawyer's services and the impression a junior lawyer makes on them can go a long way towards making the junior lawyer a success or failure in the firm.¹⁸¹

1. The Practical Context of Legal Research

And this is one of the reasons why law students should be taught about this topic within their legal research class. Understanding how the legal information market operates, and the pressures inherent within it to maximize profit – and the resultant impact such pressures could have on the availability and quality of information available to them as legal researchers – is a vital part of a skills-based research curriculum.

While much of this information might seem arcane and irrelevant to the subject of legal research, there is another, even more pressing, reason why law students should learn something of legal information economics. Put simply, one of the keys to unlocking students' minds about the relative merit of print research media is the importance of conducting efficient legal research. Simply hearing the words and understanding that their teachers want them to be efficient legal researchers is not enough: students need to believe that efficiency is a prized attribute of new lawyers and need to understand why this is. Indeed, the importance of efficiency might be a difficult concept for students to grasp, given their likely precarious grasp on some basic principles of law firm economics. This, in turn, requires an exploration of the economic impact of legal research and legal information on law firms, a crucially important topic for a junior associate's survival in a law firm and something that associate will not learn anywhere else but in their research class.

¹⁸¹ I am using the law firm as a proxy for any number of potential employers. In fact, most law students will not work in large firms with such hierarchical layers as junior and senior associates and partners. See, n. 19. Of course, very few law students can know, in their first year of law school, whether they will practice in a firm, government office, or some other practice environment. But regardless of where a junior lawyer works, the person assigning research tasks will function in the "client" role in the sense I am using the term here, and the law firm metaphor is a convenient way of encapsulating that relationship.

a. The Economics of Legal Research

In essence, law firms use these research projects to give junior associates experience at the intangible skill of client servicing, with the assigning attorney serving the role of client. When the client's needs are met the junior attorney prospers in the firm, and when the client's needs are not met the junior attorney loses ground. As described by Mark Herrmann, a partner in the Cleveland office of Jones, Day, Reavis & Pogue, the most important thing a junior associate can do is to earn the partner's trust. "If I trust you, then I will ask for your help on my cases. If everyone else at the firm also trusts you, then everyone will want your help. You will be offered the finest work available, and you will be able to pick and choose the most interesting projects. You will select the projects that give you the most responsibility. Your career will skyrocket."¹⁸² By contrast, Herrmann warns, if an associate runs up a large bill using a computer for research, "[t]hirty days later, our financial department will tell me that I am supposed to charge our client thousands of dollars for the time you wasted on a computer. I will have to decide whether this cost can properly be charged to the client. After I make that decision, I will decide never to work with you again. The internal market for your work just shrank."¹⁸³

The importance of larger firms to the legal information market has led publishers to focus more on them and their needs than the numbers of lawyers practicing in those firms might warrant. Moreover, it seems likely that, in the future, West and Lexis/Nexis will concentrate more on the needs of the large firms that constitute such an important part of their business. Solo practitioners and small firms do not appear to be an important part of the marketing strategy of either of these services.¹⁸⁴ It seems likely that this fact is also the reason why the cost of legal information has been, and remains, so high: larger firms and their clients can afford to pay these costs more readily than can smaller firms.

¹⁸² Mark Herrmann and Myriam E. Gilles, *This Is What I'm Thinking: A Dialogue Between Partner And Associate*, 25 *Litigation* 8 (1998).

¹⁸³ *Id.*, at 64.

¹⁸⁴ Lexis/Nexis does offer LexisOne, a service that allows practitioners access to the Lexis/Nexis service for a graduated series of charges based on the amount of time for which usage is sought. Westlaw offers Westlaw PRO, a service designed to meet the needs of smaller law firms. In addition, both Lexis/Nexis and Westlaw offer free alternatives to their principal sites, although the free sites offer less coverage and the search capabilities are more limited. Relying on any of these services as primary research sites, however, could prove dangerous. A recently discovered problem with LexisOne's Supreme Court database meant that cases decided prior to 1908, or between 1945 and 1975, could not be retrieved through use of a keyword query. Genie Tyburski, *The Devil is in the Details*, *The Virtual Chase* (February 14, 2005), accessible at http://www.virtualchase.com/articles/devil_in_the_details.html. Although Lexis claims to have fixed this particular problem, it points out a disturbing danger in online services. "Technical glitches could plague any online service, whether free or not. But when they corrupt a portion of a database, or cause a single feature to malfunction, they may go undetected for a while." *Id.*

b. The Cost of Legal Research From a Law Firm's Perspective

Legal publishing is such big business because legal information is expensive, and law firms bear the brunt of the cost.¹⁸⁵ The cost is both direct – materials cost a lot of money to buy and keep up to date – and indirect – print media costs a lot to house and computers require investment in collateral expenses like broadband internet access, upgrades, and non income-generating support staff to maintain network systems. All lawyers in a firm share the burden of paying for these costs, so understanding what they are, and how they are accounted for, is essential information for a junior lawyer.¹⁸⁶

i. The Costs of Print Materials

Costs of print materials are difficult to assess, because the price varies based on geography, practice areas, whether material is bought new or used, and the pricing changes imposed by the publishers. Nonetheless, some information exists that allows us to approximate the cost of developing and maintaining a print library for legal research.¹⁸⁷

The cost of maintaining a core collection – a basic set of materials necessary to practice in state court in a particular jurisdiction,¹⁸⁸ together with materials necessary to remain up-to-date in state and national law¹⁸⁹ – varies depending on the size of the state and on whether the materials are purchased new or used. In 2002, a set of new core materials for a small state like Rhode Island would be approximately \$7,300 with an annual supplementation cost of approximately \$2,400.¹⁹⁰ A used set of the same materials would cost approximately \$3,400 with the same annual supplementation cost.¹⁹¹ In a

¹⁸⁵ The large firm market carries a disproportionate amount of significance to the legal information market. Reed Elsevier has conducted additional research indicating that around 50% of the small firm market (law firms with 1 – 20 attorneys) do not subscribe to either Westlaw or Lexis-Nexis. *JP Morgan Survey*, at 11. And although large law firms (more than 21 attorneys) might only employ 11% of those attorneys in private practice, they account for 60-70% of the money spent on legal information. *Id.* at 8.

¹⁸⁶ This might appear to be a welter of arcane and unnecessary information for first year law students to learn. But most research teachers emphasize the high cost of computer-assisted legal research and there is no reason why students should not understand something about the costs associated with print-based research as well.

¹⁸⁷ The price of second-hand materials is, of necessity, an approximation. During the recent flight from print based legal research materials, second-hand law books were being offered “free for the cost of shipping.” Robert C. Berring, *Legal Research and the World of Thinkable Thoughts* J. App. Prac. and Proc. 305 (2000).

¹⁸⁸ At a bare minimum, a state court core collection should include a set of state statutes, reporters covering the state's appellate courts, a digest allowing one to research the reporters, a Shepard's citator allowing one to update the status of cases, and a set of rules governing practice in the state courts.

¹⁸⁹ These materials might include a law dictionary, a states-specific legal periodical, and a national periodical like the National Law Journal for updates on national law.

¹⁹⁰ Kendall Svengalis, *Legal Information Buyer's Guide And Reference Manual*, (“Svengalis 2002”) 25 (2002). Significantly, in the most recent edition of his Manual, Svengalis has eliminated the cost of core reporters in paper format, replacing them with the cost of an electronic service. Kendall Svengalis, *Legal Information Buyer's Guide And Reference Manual* (“Svengalis 2005”), 27 (2005). The result is an interesting exercise in savings and added expense: the start-up cost drops from \$7,300 to \$4,935.50, but the annual supplementation cost rises from \$2,400 to \$4,118. *Svengalis 2005*, at 27.

¹⁹¹ *Id.*

large state like California, the costs would be approximately \$10,800 for new materials, \$4,500 for used materials, and \$4,100 for annual supplementation.¹⁹²

Although a core collection such as this might be adequate for some law firms, others would require additional materials, driving up the cost of a print library. A set of federal materials in 2005, for example,¹⁹³ would cost approximately \$41,173 new, \$10,021 used, and \$12,098 in annual supplementation costs.¹⁹⁴ Secondary materials to aid in research¹⁹⁵ could increase costs by approximately \$14,000 new, \$5,800 used, and \$13,000 in annual supplementation costs.¹⁹⁶

The numbers show how expensive maintaining a print library can be for a law firm. In particular, supplementation costs have recently been rising at an alarming rate, and that increase shows no sign of slowing down. As an example, the supplementation costs for Am. Jur. 2d in 1993 was \$1,3000.¹⁹⁷ In 2001, only eight years later, the supplementation cost had risen to \$3,058.75, and in 2005 the figure is \$4,560.75¹⁹⁸ But even assuming the present supplementation costs to be accurate, a medium sized collection of materials could cost a law firm \$60,000 per year to maintain.¹⁹⁹

Costs for materials alone do not constitute the entire cost of maintaining a print library. In addition to the costs of buying the books, a law firm must pay to shelve and store them. The shelving cost is not substantial, but the per foot cost of office space can be considerable, especially when the footage is not being put to productive use (such as an office where an attorney sits and bills time to a client) but rather is being used for passive storage of print materials.²⁰⁰

The cost of office space varies widely depending on location. As an example, the average per square foot cost of Class A office space in Washington D.C. during the first quarter of 2002 was \$35.²⁰¹ Assuming 500 square feet for library space necessary to hold the collection described above (together with some modest study space), the physical cost of this library would be approximately \$70,000.

¹⁹² *Id.* Svengalis miscalculates the cost of used materials in California as \$2,775.95, and the cost of annual supplementation as \$4,833. The above totals are corrected.

¹⁹³ A basic set of federal materials would include a U.S. Code, a set of the Code of Federal Regulations, Supreme Court, Circuit Court of Appeals and District Court reporters, digests to aid in searching, and civil and federal rules of procedure.

¹⁹⁴ *Svengalis 2005*, at 28.

¹⁹⁵ For example a set of American Law Reports (“A.L.R.”) 3d to 5th editions, the A.L.R. index, and a set of Am. Jur. materials including Am.Jur. 2d, the Am. Jur. Proof of Facts and trials, and Am. Jur. Legal and Pleading Forms.

¹⁹⁶ *Svengalis 2005*, at 28.

¹⁹⁷ Email from Kendall Svengalis to the law librarians listserv, dated October 11, 2002.

¹⁹⁸ *Id.*, *Svengalis 2005*, at 28.

¹⁹⁹ This number would have to be adjusted downwards once tax allowances are factored in.

²⁰⁰ Proponents of print libraries would, of course, argue that library space is productive, in that it allows attorneys to generate income through the legal research necessary to advance a client’s position and is, therefore, an extension of an attorney’s office space.

²⁰¹ Alexandria Economic Development Partnership, Inc., *Comparative Cost Report: Alexandria Virginia and Washington D.C.* (July 2002). Located at <http://www.alexecon.org/alx-wdc.html> accessed on July 1, 2005.

And in addition to the physical cost, the time devoted to maintaining the print collection, by adding new pocket parts and discarding old ones, shelving new volumes, and so on, must also be factored into the cost equation. This cost will be incurred regardless of whether the firm hires a full or part-time librarian or uses an attorney to perform that task. If the firm uses a non-attorney, the cost is the salary paid to the librarian, and if an attorney does the work the cost is the value of billed time lost to library administration.

Accordingly, and recognizing that approximations and variations in collections and practices would cause the number to fluctuate widely, it is not unreasonable to place the cost of a modest state and federal print library collection at well in excess of \$100,000.

ii. The Cost of Internet-Based Materials

But print costs, and the costs of storing print materials, are not the only legal information cost law firms must pay. In order to be competitive, the firm must also subscribe to either Lexis or Westlaw and probably both. Costs for these services are difficult to determine because of the variety of pricing packages offered by legal information publishers. As an example only, the yearly²⁰² cost of a complete Westlaw PRO²⁰³ package (including all state and federal primary and secondary libraries and KeyCite) in a level 1 state²⁰⁴ 2005, with charges based on each member of the firm regardless of usage,²⁰⁵ ranged from \$13,512 for a one or two person firm, to \$52,236 for a sixteen to twenty person firm.²⁰⁶

Lexis-Nexis and Westlaw offer four types of pricing structure: hourly pricing; transactional pricing; individualized packages (designed for small firms, with coverage tailored to the firm's geographical and practice areas); and fixed rate plans. These are becoming much more common, and are typically for larger firms. The flat fee is negotiated based on prior usage, and in subsequent years, the contract is renegotiated based on the previous contract year's usage. This is an important point to remember: just because the firm pays a flat fee does not mean that time spent on the service is not extremely important to its future costs.²⁰⁷ This point tends to be lost on many younger

²⁰² Svengalis's tables indicate that this is a monthly charge but the supporting text makes clear that these are yearly totals. *Svengalis 2005*, at 144-45.

²⁰³ Westlaw PRO ("Predictable Research Online") is a program designed for smaller firms and government offices whose need for legal research focuses on one jurisdiction or practice area. *Svengalis 2005*, at 144.

²⁰⁴ Alabama, Arizona, California, District of Columbia, Florida, Iowa, Illinois, Indiana, Louisiana, Maine, Massachusetts, Michigan, Minnesota, Missouri, New Jersey, New York, and Texas. *Svengalis 2005*, at 145.

²⁰⁵ Westlaw requires that every lawyer in the firm be counted for purposes of the Westlaw PRO contract, even if some attorneys in the firm do no legal research. *Svengalis 2005*, at 145.

²⁰⁶ *Svengalis*, at 120.

²⁰⁷ The flat fee also covers only certain libraries or databases within the service. Although the fee typically covers all the case law and statutory information available on Lexis or Westlaw, it typically will not cover, for example, information available on the service that is licensed from other publishers. If, for example, you are able to access a BNA publication on Westlaw, the cost of accessing that service will not be covered by the flat fee a law firm pays to West.

attorneys, who believe that Westlaw and Lexis use at a law firm with flat fee arrangements is, in essence, like using these services at law school. It most assuredly is not.

A flat fee of \$10,000 per month would not be unsurprising for a medium sized law firm with an active litigation practice. So the total cost of legal information for the hypothetical Washington D.C. firm described above would be \$230,000 -- \$110,000 for print materials and storage and \$120,00 for either Westlaw or Lexis.

c. Accounting For The Cost Of Legal Information

Because law firms operate as businesses, and because the partners who own the business prefer to make a profit at the end of the year, they must find ways to pay for all costs associated with law practice including the costs of legal information. Although much of how this is accomplished is relatively straightforward, and therefore requires only a quick summary here, the role the billable hour plays in law firm accounting is particularly important when considering the context within which legal research is conducted in practice.

Almost all law students have heard of the billable hour concept before they enter law school or have learned of it soon thereafter. Law firm websites designed to inform prospective summer associates make no secret of the firm's expectation that an attorney will bill a certain number of hours,²⁰⁸ and even indicate that billable hours in excess of the required number might entitle the young lawyer to a bonus.²⁰⁹ To a logical, uninformed young attorney, therefore, efficiency might appear to be an unwelcome trait: every task ought to take as long as possible in order to maximize the number of hours billed on any particular project, maximizing the benefit to both the firm and the individual attorney. That this strategy is potentially fatal to a young lawyer's career is something students should discover sooner rather than later. And in order to understand why this should be, students would learn more about what firms really mean when they speak of billable hours.²¹⁰

Lawyers charge clients for their time based on an agreed-to hourly rate. The two principal elements that go into determining an attorney's hourly billing rate are profit and cost.²¹¹ Just like any other business, a law firm exists to make money for its owners. In

²⁰⁸ See, e.g., the statement of Wildman Harrald, a 215 attorney law firm based in Chicago. Wildman Harrald has a "minimum client billable hours requirement for associates [of] 1950 [hours]. All associates are required to record at least 100 hours of *pro bono*, professional development, or firm assistance activities. Associates receive billable value bonus consideration when their billable hours exceed 2000. Associates also may be considered for an Investment Bonus for *pro bono* [sic.], professional development, and firm assistance activities." http://www.whad.com/career/billable_hrs.htm (accessed July 1, 2005).

²⁰⁹ *Id.*

²¹⁰ A discussion of billable hours, of course, is strictly relevant only to those students who will enter private practice. But the importance of efficient legal research is something all lawyers should understand, even if they practice as government lawyers or in some other area where time billing is not of prime importance. And even if first year students could say with certainty that they will never practice in a time billing environment, it would still be important for them to understand the pressures under which their billing colleagues work.

²¹¹ In fact, the calculation is a little more complicated than this somewhat simplistic explanation. One

law firms, the owners are typically partners, each of whom owns a percentage of the business. The partners make money when, over the course of a year, the law firm brings in more money in fees than it spends in costs. In order to make a profit, the firm must estimate what its total yearly costs will be and then attribute a percentage of those costs to each attorney. It then needs to build in an additional amount that will represent profit to the firm, and reduce all of this to an hourly rate it will charge the client.

A law firm associate bills the firm's clients for each hourly increment²¹² the associate spends on a matter.²¹³ Each time increment billed by the associate, therefore, represents time that was spent on only one client's matters, and that time cannot be charged to any other client.²¹⁴ Because law practice tends to be an expensive undertaking,²¹⁵ the profit margins are relatively narrow and law firms must be assured that their young associates are willing to work hard to contribute to the firm's profitability. The yearly billable hour requirement is used by firms as a measure of a lawyer's commitment to the firm.

Just because an attorney bills for time, however, is no guarantee that the client will pay for that time. Some time is written off by a billing attorney before the client receives the bill,²¹⁶ and other time is challenged or rejected by the client after the bill is received.²¹⁷ Thus the raw number of hours billed by an attorney is a poor guide to that attorney's profitability and law firms use the recovered, or "realized," hour – a calculation of how

possible formula for determining a billing rate has been given as " $B = T / (R \times U)$, where B = minimum hourly billing rate[,] T = target revenues for the lawyer[,] R = realization on that lawyer's time[, and] U = expected lawyer utilization." Ward Bower, *Setting Rates, Defining Strategy, Exploring Alternatives*, 23 Of Counsel (volume 2) 5 (2004). In addition, issues such as client relations, traditional rates for the service being offered, and idiosyncratic firm needs must be factored in.

²¹² Typically, law firm time is billed in 1/10th of an hour, or six minute, increments.

²¹³ The time an associate bills on a project is used as the multiplier of the associate's hourly billing rate to determine the cost to the client of the associate's services. So if an associate bills at a rate of \$150 per hour, and works for half an hour on a project, the cost of that time to the client would be 150×0.5 , or \$75.

²¹⁴ Unless, of course, the associate engages in the unethical practice of double-billing, a practice in which two clients are billed for the same block of time. For example, an attorney might travel from a deposition while drafting documents for the benefit of another client. If the attorney bills one client for travel time and the other client for time spent drafting documents, the attorney has billed twice for the same block of time. Lest there be any doubt, the American Bar Association confirmed in 1993 that his practice was contrary to a lawyer's professional responsibility to clients. ABA Comm'n on Ethics and Prof'l Responsibility, Formal Op. 93-379 (1993).

²¹⁵ Costs that must be recovered include attorney and staff salaries, space rental, office furnishings and equipment, and library costs, among others.

²¹⁶ The fact that a law firm might choose not to bill a client for all the time a lawyer spends on a project might surprise some law students but it is a standard practice. See, e.g., Institute of Management and Administration, Inc., *Use This Primer to Help Partners React to Financial Concerns* ("Management Primer"), 04-5 Law Off. Mgmt. & Admin. Rep. 5 (2004)(assuming a percentage of time will be "written down" when providing an illustration of a realization rate calculation.) Legal research is a particularly dangerous area for billed time that might not be charged to a client. One responder to the *Howland and Lewis* study commented that "[a] law firm cannot ethically bill a client for an inefficient and, therefore, unnecessarily costly search. The firm routinely absorbs the excess charges for searches that should have cost half as much." *Howland and Lewis*, at 387.

²¹⁷ When client disputes on bills cannot be resolved, they can end up in litigation. For one example of a case where the client declined to pay for the cost of computerized legal research, see *Ryther v. KARE II*, 864 F.Supp. 1525 (D.Minn. 1994).

many attorney hours are actually paid for by the firm's clients – as a yardstick to determine how valuable the attorney is to the firm.²¹⁸ And legal research is an area in which clients are likely to restrict an attorney's billed time and challenge time billed in contravention of pre-established billing guidelines.²¹⁹

An attorney who bills many hours, but who is able to recover only a small percentage of those hours, is a costly employee for a law firm to carry because the costs attributable to that attorney are the same as for a profitable attorney, yet the amount of fees received by the firm as the result of that attorney's work is proportionately lower. A lawyer with high billable hours but low recoverable hours is, in fact, in great danger in the cost-conscious world of contemporary private legal practice.

A simple example makes this more readily comprehensible. Suppose a law firm pays an associate \$100,000 in salary each year. The associate's secretary makes \$40,000 per year and the associate shares the secretary with one other attorney, making \$20,000 of that salary attributable to the associate. The law firm must pay rent on the associate's office, must pay for the electricity the associate uses for light, heat, and power, must pay for the phone line, computer, photocopier, fax machine, and so on. Once salaries for the attorney, secretary, information technology staff, mail room staff, and other pro-rated expenses are added up, assume the associate ends up costing the firm \$250,000 per year.

If the firm charges \$100 per hour for the associate's time, the associate would have to bill 2,500 hours per year, and the firm would have to collect every penny billed to its clients, just for the firm to break even. This is an unacceptable result – it represents a daily billing requirement of almost 7.5 hours per day, seven days a week, not considering weekends, national holidays or vacation time,²²⁰ and it assumes an unrealistic realization rate of 100%.

If, however, the firm bills \$250 for the associate's time, and the associate bills 2,000 hours per year, the firm will recover \$500,000 – half of this covers the firm's cost for employing the associate and half goes to firm profit. Although 2,000 hours still represents a substantial time commitment (just over 166 hours per month, 41 hours per

²¹⁸ See, e.g., Niki Kukes, *The Hours: The Short, Unhappy History of How Lawyers Bill Their Clients* 2002-Oct. Legal Aff. 40 (2002)(billable hours are reduced to "realization rates" which can be "translated into precise expectations that can be used to guide lawyers' performance.") Many practicing lawyers would be startled to hear that at least one organization recommends that realization rates should be "at least" ninety percent of billed time. *Management Primer*. The same organization has recommended that partners should not receive credit for billed hours that are not "realized." Institute of Management and Administration, Inc., *ALA Panelists: Why Most Law Firms Could Profit From a Financial Tune-Up*, 01-8 Law Off. Mgm't. & Admin. Rep. 1 (2001).

²¹⁹ For an example of how some clients are establishing research guidelines, see Paul S. Smith, Steven Karry, Louis Bernstein, Mark Herrmann, and Tracy Kozicki Stratford, *Engagement Letters (Including Written Corporate Policies and Procedures)*, chapter in *Successful Partnering Between Inside and Outside Counsel* (Robert L. Haig, editor)(2003)(suggesting language in billing guidelines that requires client preauthorization of computerized legal research and preapproval of any single issue research project estimated to take in excess of four hours.)

²²⁰ Unreasonable though it might be, many lawyers bill 2,500 hours or more each year. Typically though, this is a personal choice and not a firm requirement.

week, or 8.3 billed hours per day²²¹ calculated on a five day week), it is a typical benchmark used by many firms for associate billing requirements.

Law firms typically account for the cost of maintaining a library as overhead, and overhead is one factor in determining an attorney's hourly billing rate. By contrast, firms often view electronic research as client specific, and therefore bill that as an additional cost, similar to postage or photocopying. Courts, however, have been generally unsympathetic to this form of accounting. "It is well settled that computer aided research, 'like any other form of research, is a component of attorney's fees and cannot be independently taxed as an item of costs.'"²²² Although other courts have been more sympathetic to the idea of computerized legal research being treated as a cost item, rather than as a component of fees,²²³ and this issue can often be resolved in an itemized contract negotiated before client representation begins, law firms must always be prepared for the possibility that its legal research costs might go unpaid.

It is in this light that young attorneys should view the law schools' message about efficient research practices. An attorney who can conduct effective legal research in a time-efficient manner is substantially more valuable to a firm than another attorney who obtains the same research results but spends substantially longer doing it.

2. Teaching legal research as a client-based activity

Perhaps the most effective single step legal research teachers can take to confront the complex cultural issues inherent in the entrenched positions of "traditionalists" and the "Google generation" is to adopt a more fluid, client-based approach to legal research. While this likely entails moving away from the "books first, computers second" approach to research education, the benefits from adopting this position are substantial.

The standard approach to legal research teaching in a two semester program is to teach print-based materials in the first semester and computer-based materials in the second semester. Some are convinced that this is the correct approach²²⁴ while others argue that students should first be taught how to be effective computer researchers.²²⁵

²²¹ A billed hour is not the same as an actual hour. It can be shorter than a chronological hour: 10 short letters to different clients, for example, each taking 3 minutes to dictate, would take only thirty minutes of chronological time to write, but each would constitute 0.1 hours of billed time (because lawyer time usually is calculated in six minute segments) for a total of one billed hour. Typically, though, a billed hour takes longer to accomplish than an actual hour. Interruptions, natural breaks, lunch, an unwillingness to write down all the time an attorney took on a seemingly simple project, and a host of other reasons usually mean that one can only bill between 60-70% of time at work, sometimes less. This average increases with experience in billing, but rarely will an attorney be able to bill 100% of any day spent at work.

²²² *Ryther v. KARE II*, 864 F.Supp. 1525, 1534 (D.Minn. 1994), quoting, *Leftwich v. Harris-Stowe State College*, 702 F.2d 686, 695 (8th Cir. 1983).

²²³ See, e.g., *In re Cedant Corp., Derivative Action Litigation*, 232 F.Supp. 2d 327, 344 (D.N.J. 2002)(allowing recovery of computer research as element of costs).

²²⁴ See, e.g., Lucia Ann Silecchia, *Designing and Teaching Advanced Legal Research and Writing Courses*, 33 Duq. L. Rev. 203, 212, n. 31 (1995)("I adamantly believe that students should not be given

In the days before an alternative model, of course, there was no reason to do anything other than teach research using the books. Since the advent of the computer, many believe that starting research instruction with the books is all the more crucial when, as Keefe notes, students come to law school “without the underlying lessons in library science – such as the importance of controlled vocabulary and taxonomies – that employing [print sources] used to teach.”²²⁶ Because students lack this knowledge, they need to learn something about information science as well, and book-based legal research is a good introduction to all of this. Once students have mastered the pre-indexed print media, they are better prepared to tackle the index-free world of computer-assisted legal research.

There is much merit to the theory of this position, but the practice is often less successful. Students of the Google generation simply discount the significance of books and print-based research because, for them, these media have not played a significant role in getting them to law school. And since they know that electronic legal databases exist, that they will be learning about them soon, and that many, if not most, lawyers in practice use computerized research extensively,²²⁷ there is little incentive for them to pay more than lip service to the first semester of print-based research instruction.²²⁸

The better alternative is to take the same ‘secondary source moving to primary source’ research model that has been taught for years in law schools²²⁹ and adapt it for use in both print and computer-assisted legal research, and teach the available secondary sources in both their print and computer-based versions simultaneously. Using this approach, students learn the benefits of both approaches.²³⁰ And they learn why it is important to use the appropriate materials in the most accurate and efficient manner possible.

[computer-assisted legal research] training until they understand the theory and organization behind the traditional tools.”)

²²⁵ See, e.g., Theodore A. Potter, *A New Twist on an Old Plot: Legal Research is a Strategy, Not a Format*, 92 Law Libr. J. 287 (2000)(arguing that computer resources should be taught first with print resources taught “where they are appropriate.” *Id.* at 287.); Thomas Keefe, *Teaching Legal Research from the Inside Out*, 97 Law Libr. J. 117, 124 (2005)(arguing that the change in the way students approach research means that print resources no longer have the same relevance to the educational process they once had.)

²²⁶ Keefe, at 124.

²²⁷ Keefe cites data from the 2002 ABA Legal Technology Survey Report indicating that the surveyed attorneys conducted two thirds of their research using computers and one third using print resources. Keefe, at 123, citing Legal Tech. Res. Ctr., Am. Bar Ass’n., 2002 *Legal Technology Survey Report: Online Research*, at xi (2003).

²²⁸ If, indeed, they do even that. Keefe notes a “prevalent problem of students’ borrowing second and third year students’ passwords to get around print-only requirements.” Keefe, at 125.

²²⁹ See, e.g., *Oates and Enquist*, at 6 (“If you are unfamiliar with the area of law, spend 10 to 60 minutes reading about the law in a secondary source”); *Kunz*, at 37 (“Unless you know a fair amount about the subject already, you most likely will start your research in secondary authority. . . .”); *Mersky and Dunn*, at 16 (“[I]t is useful to consult general secondary sources for an overview of relevant subject areas.”); *Sloan*, at 331 (“[T]here are several places where you might consult secondary sources . . . depending on how much information you have about your issue when you begin your research.”).

²³⁰ Locating and Shepardizing cases, for example, is faster and easier when using computers. Statutory research, by contrast, is much easier and faster using print-based materials.

At least as important, student should also learn how their “clients” want to receive information. Sometimes, junior lawyers are expected to deliver comprehensive legal analyses in written form and sometimes they are expected to be able to deliver short written answers, or even oral reports, on simple research tasks. Legal research programs can help students to understand the importance of providing the appropriate detail in response to a research request by assigning different types of research exercises for students to complete.²³¹

Legal research programs can also simulate the law practice environment, with its emphasis on client servicing, in several easy ways. Instead of the research log many programs require their students to maintain, for example, students could be required to record the time spent on research using timesheets.²³² The research activities recorded on a well-drafted timesheet should capture essentially the same information as a carefully-maintained research log, but the added simulation of practice should render the activity more relevant, and more interesting, for students.²³³ In addition, students could be assigned short in- or out-of-class

²³¹ This is not the place to bring up the old argument about the merits of the “treasure hunt” exercise. For a criticism of this type of exercise, see, e.g., Helene S. Shapo, *The Frontiers of Legal Writing: Challenges for Teaching Research*, 78 L. Libr. J. 719 (1986)(treasure hunts fail to make meaningful use of student research skills); Christopher G. Wren and Jill Robinson Wren, *Teaching Legal Research*, 80 L. Libr. J. 7 (1989)(criticizing the “treasure hunt” or “search and destroy mission” style of research instruction.) And the typical treasure hunt exercise, where a student merely locates information within a library volume without having to interact with the information in any way, has very limited value to students who feel their time is being taken up by a mindless activity, something that likely adds to their frustration with the physical library and print-based research media. There are, however, short research exercises that can replicate the practice world. Asking a student, for example, to locate the appropriate statute of limitations for a personal injury claim in a particular state, while not analytical in nature, is the type of short research task often assigned to junior lawyers. This type of exercise, intermingled with lengthier, more analytical, research exercises can have a beneficial psychological effect as well. Law school is a place of almost infinite ambiguity, where “right” answers are hardly ever to be found. In such an environment, the occasional short research exercise which produces a definite positive result can be heartening to a floundering first year law student. See, Terry Jean Seligman, *Beyond “Bingo!”: Educating Legal Researchers as Problem Solvers*, 26 Wm. Mitchell L. Rev. 179, 180 (2000)(noting the spirit-raising effect a “Bingo!” moment can have.) Seligman’s article goes on to observe that legal research is actually more complicated than this type of exercise might lead students to believe, and proposes that legal research education should move to a “problem-based context for [research] assignments. . . .” *Id.* And she is surely correct that such short exercises should not constitute a student’s entire research practice. Giving students the occasional boost by finding “the federal penalty for shooting a golden eagle,” (*id.*) however, is not always a bad thing.

²³² This also serves a legal writing goal. The timesheet is probably the most ubiquitous written document prepared by lawyers in private practice, yet rarely, if ever, are law students shown how to draft one.

²³³ This is particularly true if the timesheets are used as an introduction to a discussion of the billable hour and what it means. Students could have an hourly rate assigned for their time and the putative cost of their research activity to the firm’s clients could be calculated. Students could also exchange timesheets and then evaluate whether the time spent on research was justified and, if not, cut some time from their fellow students. In the spirit of the Westlaw and Lexis rewards programs, a small prize could be awarded for the student who most effectively embodied accuracy and efficiency throughout the semester.

research assignments by email with a short response time. And students could be asked to conduct non-legal, but still legally relevant, research.²³⁴

By mixing longer and shorter research assignments, simulating practice by requiring students to record time, and by teaching them about the context in which legal research takes place in practice, legal research teachers can keep their research class interesting and lively and, most importantly, can help students understand the importance of identifying and responding to the needs of their clients, both internal and external.

V. CONCLUSION

Although “The Hitchhiker’s Guide to the Galaxy” might seem a whimsical choice of metaphor for the teaching of American legal research in the early twenty-first century, there are some features of that fictional publication that make it an ideal starting point for this discussion of real legal research materials. First, it is a book, albeit an electronic one, and therefore combines the best features of a computerized research tool – a large memory, speedy interface, and updates that keep it current – with an old-fashioned, book-based indexing feature allowing for easy access to the book’s information.²³⁵ Second, it creates within its users the belief that it provides access to all necessary information²³⁶ and its publishers intentionally promote that perception.²³⁷ And third, the information it provides is frequently less than complete, although a reader without prior knowledge would have difficulty discerning this.²³⁸

The benefits and dangers posed by using “The Hitchhiker’s Guide to the Galaxy” are similar to those faced by those young lawyers who are uncritical about using electronic resources for their legal research. They will almost certainly find some relevant information on the topic at hand, and they will find that information quickly and with ease. But that success might lead to overconfidence and incomplete research. Failure to find a result might also lead to the belief that there is nothing to find, an assumption that depends on a belief in the sophistication of their research technique that might not be well founded.

Legal research programs today face the challenge of teaching research technique to students who might have neither the experience nor even the vocabulary to properly understand fundamental research concepts while simultaneously teaching students about the materials used to conduct legal research. And they must accomplish this task in a short period of time, often sandwiched into a legal writing program that faces its own series of daunting challenges.

²³⁴ Asking them to find a corporation’s filings with the Security and Exchange Commission, for example, as well as other publicly available financial information and – particularly important for litigation – the corporation’s local agent for purposes of service of process.

²³⁵ “You press the button here, you see, and the screen lights up, giving you the index.” *The Hitchhiker’s Guide to the Galaxy*, at 53.

²³⁶ “It tells you everything you need to know about anything. That’s its job.” *Id.*

²³⁷ A sign at the publisher’s office reads “The *Guide* is definitive. Reality is frequently inaccurate.” Douglas Adams, *The Restaurant at the End of the Universe*, 38 (1980).

²³⁸ The *Guide*’s most complete entry on “Earth”, for example, is “Mostly harmless.” *The Hitchhiker’s Guide to the Galaxy*, at 63.

Given these challenges, success must be measured carefully. It is impossible, and unrealistic to expect, that a two semester combined research and writing program could produce an entire class full of sophisticated, efficient, and effective legal researchers. Curricular reform, in the guise of upper-level classes devoted to legal research, are necessary in order to meet the practicing bar's not unreasonable expectation that junior attorneys will come to practice with well-honed research skills that are ready to meet the demands placed on them by clients who want successful outcomes with a minimum capital outlay. But careful attention to the first year research curriculum, in the form of a client-based approach that contextualizes legal research and shows students both the benefits and burdens of all forms of research media, can give law students a solid foundation upon which to build their research skills.

One of the attractions of "The Hitchhiker's Guide to the Galaxy" is that it has the words "DON'T PANIC" printed "in large friendly letters on its cover."²³⁹ With care and attention, legal research programs should be able to give at least the same assurance to law students as they enter the complex world of contemporary legal research.

²³⁹ Douglas Adams, *The Restaurant at the End of the Universe*, 33 (1980).